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Hampton Road Bushland
PINJARRA

Presentation (SV WAPC
Peel Region Scheme Hearings)
09/08/06

B. Keighy & J. Lawton

Photos B. Keighy

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Photos Alderson St
Vinjara 25/10/04

(from i-photos library)

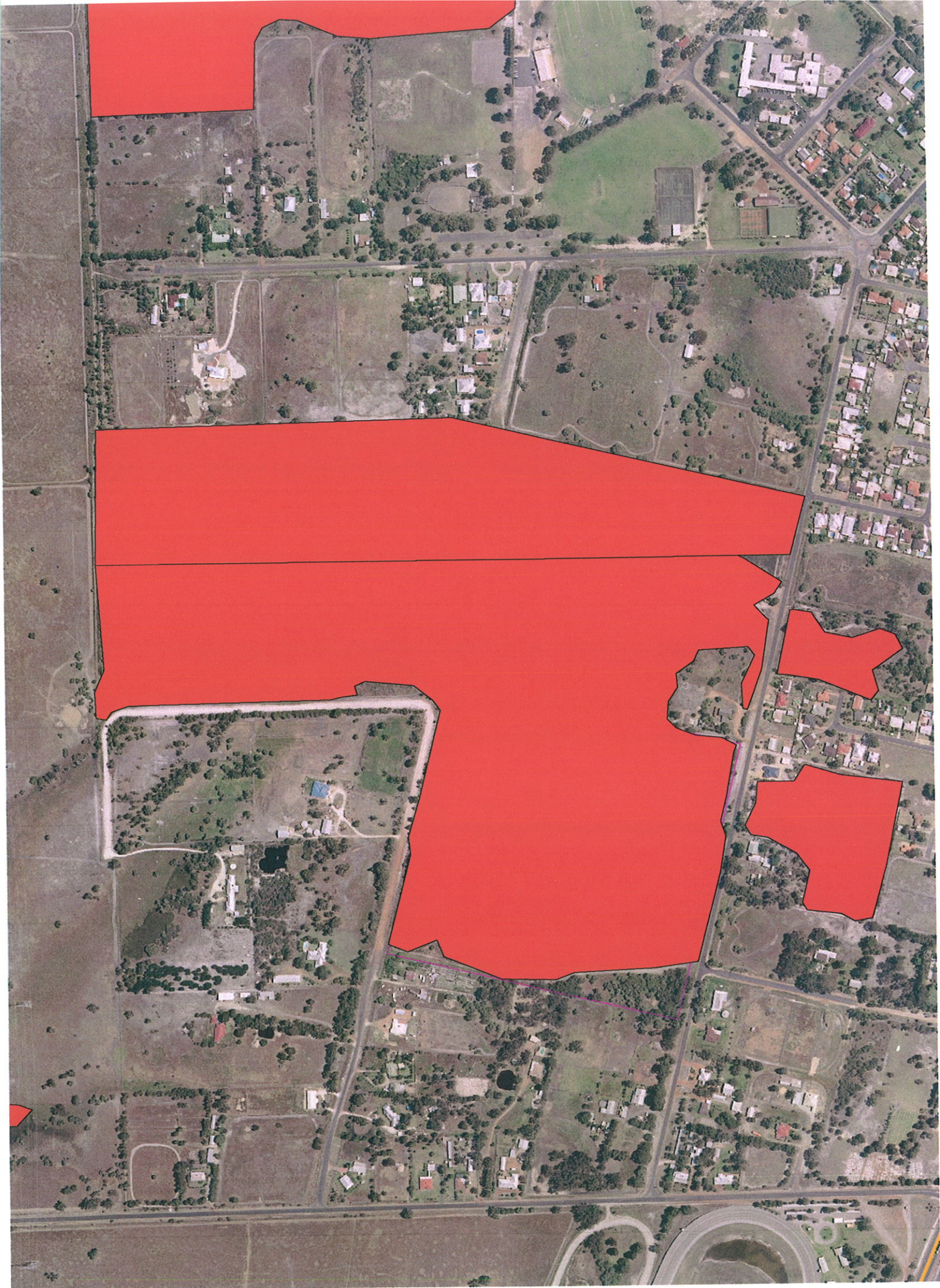
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name Subm 280 Ravenswood
total area 94 ha
bushland area 90% modified vegn
CALM res none
Env geol (map) Qha + Qpb/Qpa + Qpb
heddle veg Swan, Bassendean CtS
channel wetlands R.2, BAP2 X
basin wetlands palusplain, dampland,
cons suites R.2, 6/P.2 Floodplain
wetland man obj (map) cons, mult. use, res. ent.
lakes EPP ✓ 3 ha
DRF X
mammals X
quenda X

name
total area
bushland area
CALM res
Env geol (map)
heddle veg
channel wetlands
basin wetlands
cons suites
wetland man obj (map)
lakes EPP
DRF
mammals
quenda

name Pinjarra Industrial area
total area 43 ha
bushland area 100% modified vegn.
CALM res part NR.
Env geol (map) Qpb/Qpa + Qpb
heddle veg Bassendean CtS
channel wetlands X
basin wetlands palusplain, dampland.
cons suites P.1
wetland man obj (map) mult. use, res. ent.
lakes EPP X
DRF 1 R 6th
mammals X
quenda X

name
total area
bushland area
CALM res
Env geol (map)
heddle veg
channel wetlands
basin wetlands
cons suites
wetland man obj (map)
lakes EPP
DRF
mammals
quenda

name Subm lot 350 etc Hanley Rd.
total area 48 ha
bushland area 60% mod veg
CALM res none
Env geol (map) Qpb/Qpa + Qpb
heddle veg Bassendean CtS, Guildford
channel wetlands not mapped
basin wetlands palusplain, dampland.
cons suites P.1
wetland man obj (map) not mapped.
lakes EPP X
DRF 1 P4 6th
mammals X
quenda X

name
total area
bushland area
CALM res
Env geol (map)
heddle veg
channel wetlands
basin wetlands
cons suites
wetland man obj (map)
lakes EPP
DRF
mammals
quenda

name
total area
bushland area
CALM res
Env geol (map)
heddle veg
channel wetlands
basin wetlands
cons suites
wetland man obj (map)
lakes EPP
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name
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CALM res
Env geol (map)
heddle veg
channel wetlands
basin wetlands
cons suites
wetland man obj (map)
lakes EPP
DRF
mammals
quenda

Our Ref: 833-6-16-8 Vol 3
Enquiries: Mr John Pride (9586 4604)



FILE → 1004/05
← KEIGHERY



Ms Bronwyn Keighery
Department of Environment & Conservation
The Atrium
St Georges Terrace
PERTH WA 6000

Dear Ms Keighery

Peel Region Scheme Amendment 012/33A
Regional Open Space - West Pinjarra

In October 2005, the Western Australian Planning Commission (WAPC) sought public comment on the above amendment to the Peel Region Scheme. I write to advise that the amendment has now been finalised as advertised.

Submissions on the proposed amendment were invited and seven were received. The WAPC considered the written submissions and the views expressed during the hearings and recommended to the Minister for Planning and Infrastructure that the amendment proceed without modification.

The Minister has approved the amendment as recommended and it therefore comes into effect as advertised. The amendment to the Peel Region Scheme takes effect on and from Friday 22 June 2007, being the date of publication in the *Government Gazette*. Letters have been sent to all landowners, those who made submissions and the local government authority.

The amendment will be on public display from Friday 22 June 2007 to Friday 20 July 2007 at the offices of the Western Australian Planning Commission (Pinjarra Road, Mandurah and Wellington Street, Perth), the Shire of Murray and the State Reference Library. Details of the amendment are also available on the WAPC's website www.wapc.wa.gov.au.

Please note in your records that Peel Region Scheme Amendment 012/33A (Regional Open Space – West Pinjarra) is now complete.

Yours sincerely

Moshe Gilovitz
Secretary
Western Australian Planning Commission

26 June 2007



26/07/06

Attn: John Pride

Fax 9581 5491

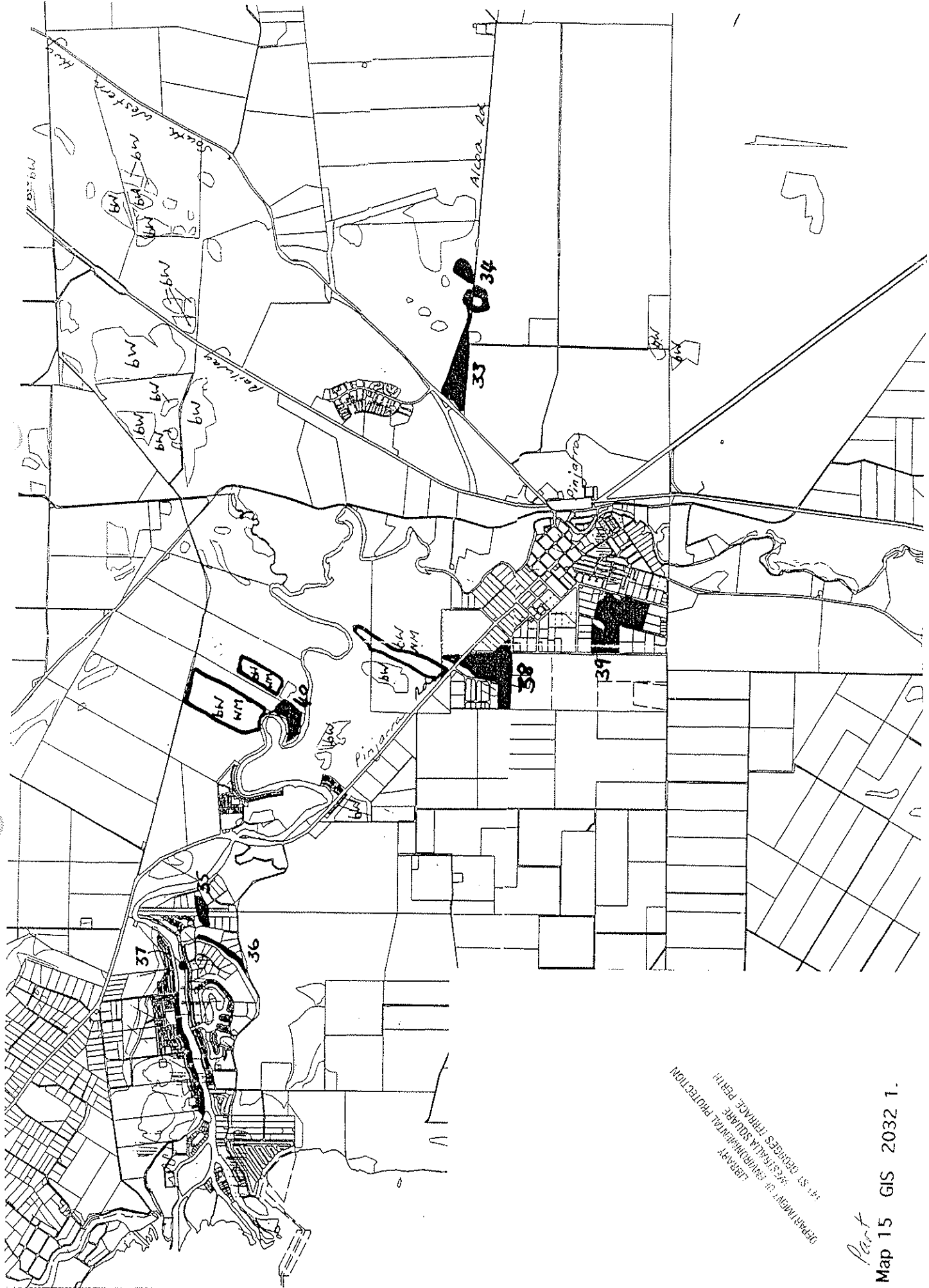
2 pages

from Bronwen
Keisley



Location 39

32



DEPARTMENT OF ENVIRONMENTAL PROTECTION
 141 ST JOHNS SQUARE
 ST. JOHNS, N.J. 07030

Part
 Map 15 GIS 2032 1.

KEIGHERY Bronwen

Subject: DPI - Alderson St Pinjarrah
Start: Mon 24/07/2006 11:00 AM
End: Mon 24/07/2006 1:00 PM
Recurrence: (none)
Meeting Status: Accepted
Required Attendees: RYAN Rebecca; KEIGHERY Bronwen

Hi Bronwen

This is the proposed time to meet the DPI Peel staff to discuss the PRS hearings.

cheers

bec

RYAN Rebecca

From: CLARK Allison
Sent: Tuesday, 4 April 2006 8:51 AM
To: RYAN Rebecca
Subject: RE: Cornerstone Legal correspondence- legal advice

A subpoena can only occur in legal proceedings as it is granted by the court to aid the legal proceedings. I take it the PRS hearings are part of the planning process so no subpoena could issue. If there are legal proceedings on foot then the State party would be advised to enlist your services and that would normally occur. Cornerstone are not likely to subpoena you without knowing what you would say. This letter is a tactic to find that out to counter your views or possibly to call you as witnesses.
I would be happy to look at a draft response.
Allison

-----Original Message-----

From: RYAN Rebecca
Sent: Monday, 3 April 2006 4:44 PM
To: CLARK Allison
Subject: RE: Cornerstone Legal correspondence- legal advice

) thanks heaps Allison.

I've just discussed this further with Bronwen and Gary, few additional questions:

- under what circumstances would a subpoena occur? could this occur as part of the PRS hearings? or an FOI? or some other process?
- how can we avoid being subpoenaed by Cornerstone Legal as hostile witnesses, and/or what can we do to ensure that if legal proceedings do occur, we ensure we are witnesses for the crown?
- can i please send you a draft response before sending off?

ta heaps
bec

-----Original Message-----

From: CLARK Allison
Sent: Monday, 3 April 2006 4:24 PM
To: RYAN Rebecca
Subject: Cornerstone Legal correspondence- legal advice

Bec and Bronwyn, unless there is some legal obligation such as a statutory requirement or subpoena you do not have to comply with Mr Houweling's request. I cannot see any such requirement on the face of the letter.

If there are proceedings on foot then the relevant documents will be discovered by the parties or subpoenaed. Until then I suggest a response to Mr Houweling stating it is not our practice to provide such information in response to a request such as his. He may come back with a subpoena but then it is another matter and you would have to comply. My branch can help you with that process.

Allison Clark
Manager Legal Services
Phone: 6364 6402
email: allison.clark@environment.wa.gov.au

RYAN Rebecca

From: CLARK Allison
Sent: Monday, 3 April 2006 4:24 PM
To: RYAN Rebecca
Subject: Cornerstone Legal correspondence- legal advice

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Allison Clark
Manager Legal Services
Phone: 6364 6402
email: allison.clark@environment.wa.gov.au

- subpoena or FOI ?
- draft to Allison of letter for checking
- how to avoid ~~being~~ being subpoenaed by them; want to be witness for crown not hostile witness for them.

Attention: Allison Clark

faxed
3/4/06

cornerstone legal

Lawyers
Tim Houweling
Warnar Spyster

1/300 Vahland Ave
Willetton WA 6155

Tel: 9259 5811
Fax: 9259 5866

Department of Environment
Level 8
141 St Georges Terrace
Perth WA 6000

Attention: Ms Keighery

Dear Ms Keighery,

Lot 295 Alderson Street, Pinjarra

We act for the owners of the above land.

Lot 295 Alderson Street is being considered for inclusion as regional open space. We anticipate a hearing to be listed shortly in respect of this matter for the consideration of it's inclusion in the Peel Region Park.

We are informed that the considered view that the land is worthy of inclusion in the Peel Regional Park is based on studies which you carried out. We are informed that you attended on the land and carried out a study in the company of our client, Mr Laurie Galloway. Further, we are informed that the Department of Environment relies on a 1992 study that you carried out based on the remnant vegetation on the alluvial soils of the eastern side of the Swan Coastal Plain and the System 6 Update Survey Program.

via Tmdgen via CALM

DOE

As we understand matters, none of the studies that you have carried out have complied with the provisions of the guidelines as set down by the Environmental Protection Authority in considering significant species in respect of the land. We would be grateful if you could clarify this for us and provide us with the relevant information for why you considered the land to contain significant vegetation to the extent that it ought to be considered to be regionally significant.

Additionally we would be grateful if you could provide us with copies of your reports in which you considered the land to be significant and provide us with copies of your field notes justifying the significance of the land.

Yours sincerely

T.Houweling

Our Ref: TH:466
Your Ref:

RECEIVED SERVICES RECEIVED
9 March 2006
CLT 218024

13 MAR 2006

1004105 ← TP FILE
Keighery

Y N

- clarify why previous studies not comply w EPA guidance
- provide info on why is reg regionally signif
- copies of reports
- field notes

UNRECORDED

cornerstone legal

Lawyers
Tim Houweling
Warnar Spyker

1/300 Vahland Ave
Willetton WA 6155

Tel: 9259 5811
Fax: 9259 5866

Department of Environment
Level 8
141 St Georges Terrace
Perth WA 6000

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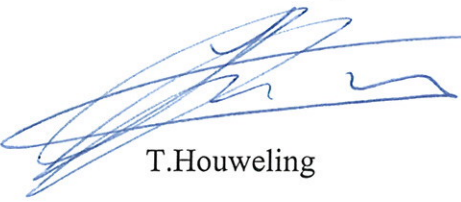
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Yours sincerely


T. Houweling

Our Ref: TH:466
Your Ref:
9 March 2006
1004105
B. Keighery
Y N

RECEIVED SERVICES RECEIVED
13 MAR 2006
CL 218024
TP AUG

ANNED

V & C Semeniuk Research Group

Research and Educational Consultants in the Environmental and Natural Sciences
Principal Postal Address:
21 Glenmere Road
Warwick, W.A. 6024
Australia

Phone: (08) 9447 3708
Facsimile: (08) 9447 3705

ABN : 58 009 096379

7th December 2005

Mr T Houwelling
Cornerstone Legal
1/300 Vahland Ave.,
Willeton, W.A., 6230

Letter report on the wetlands, Lot 295 Alderson Street, Pinjarra

Dear Tim

Thank you for inviting the V & C Semeniuk Research Group (VCSRG) to carry out an assessment of wetlands in the area Lot 295 Alderson Street, Pinjarra (Deposited Plan 180633, Certificate of Title 1400 Folio 289). To carry out the instructions in your letter, I have undertaken out a field survey (on site analysis) of the Lot, and also conducted a desk study to determine whether or not the whole of the site would be considered a wetland, or whether only a portion could be considered a wetland.

In this study, for the field survey, I visited Lot 295 and described and assessed the land under question, described and assessed the vegetation and soils therein, determined where the water table was located relative to the surface, collected soils for laboratory studies, and collected moist soil samples for determining moisture content. In the laboratory, and at the office, I processed the soil samples to determine moisture content by oven drying, and examined under a microscope and photographed the soils that were collected to determine their biogenic wetland features. The desk study involved examining the documentation in relation to Lot 295, reviewing the Water & Rivers Commission Atlas on wetlands for the region, and reviewing our own VCSRG in-house R&D data.

This letter report is structured as follows:

- 1.0 Background information
- 2.0 Description of the regional landscape
- 3.0 Description of Lot 295 landscape
- 4.0 Wetlands in Lot 295
- 5.0 Soil and water details of the wetlands in Lot 295
- 6.0 Assessment of Lot 295
- 7.0 Discussion and Conclusions
- 8.0 References

Not comprehensive

Note that this was not a comprehensive botanical study, and hence the flora noted here is not an exhaustive list. Rather, it is intended to show the diagnostic species that inhabit the wetland. Further, in the time available for fieldwork, priority was set on mapping the wetlands, and not on finding Priority species or Rare and Endangered plant species.

1.0 Background information

The Western Australia Planning Commission is intending to carry out minor amendments to the Peel Region Scheme by including Lots 295, 350 and 354 Alderton Street, amongst other lots, into the Regional Open Space reservation system. In detail Lot 295 will be transferred from Rural Zoning to Regional Open Space Reservation.

In the Inner Peel Region Structure Plan, 1997, the subject land is classified as Natural Resource Protection - Subject to further study, a classification that applies to areas of bushland in good condition that require further studies to determine appropriate mechanisms for their protection. Further examination of the subject land had taken place, which included a detailed wetland and vegetation assessment of Lot 295 and a review of the conservation values of the overall area by the Department of Planning and Infrastructure in consultation with the Department of Conservation and Land Management and Department of Environment. In this context, because of the quality and range of the vegetation in both upland and wetland areas, and the presence of rare significant and rare flora, the terrain was assessed as having local and regionally significant remnant vegetation.

In this context, it appears that the natural history attributes that have been important in assessing Lot 295 as significant are:

1. remnant upland and wetland within a region that is largely cleared
2. quality and range of upland and wetland vegetation in Lot 295
3. presence of a conservation category wetland within Lot 295
4. presence of significant and rare flora

The wetland maps presented in Volume 2B of the Water & Rivers Commission Atlas do not cover this area of Lot 295.

2.0 Description of the regional landscape

The region of Lot 295 is located in the geomorphic setting of the Pinjarra Plain of McArthur & Bettenay (1960) and in the Keybrook Suite of wetlands of C A Semeniuk (1988). This region is composed of a nearly flat to low undulating land surface underlain by sand, muddy sand, locally mud, and ironstone. The water table, where there are no drains, is often close to the ground surface, and as a result there are numerous wetlands. Using terminology of C A Semeniuk (1987), these are palusplains (seasonally waterlogged or moist plains), damplands (seasonally waterlogged or moist basins), and sumplands (seasonally inundated basins).

Throughout the region, there has been extensive clearing for agriculture, and as such, the local area of Lot 295 and its adjoining terrain supports an isolated patch of remnant vegetation (Figure 1).

numerous wetlands
← numerous wetlands
← 3 wetland types



Figure 1: Lot 295, with remnant native vegetation (circled) in the Pinjarra region

3.0 Description of Lot 295 landscape

Lot 295 is a trapezoid block of land, some 300 m x 300 m in size. The natural terrain of Lot 295 comprises low undulating landscape, consisting of low sand hills and wetlands. Overall, relative relief is low. The terrain mostly consists of dryland (the low sand hills), vegetated by *Allocasuarina fraseriana* (the sheoak formerly known as *Casuarina*, *Eucalyptus marginata* (the jarrah), *Corymbia calophylla* (the marri), *Banksia attenuata*, *Banksia ilicifolia*, *Jacksonia furcellata*, *Macrozamia riedlei* (the zamia palm), *Xanthorrhoea preissii* (the grass tree).

← mostly dryland

Numerous tracks traverse Lot 295, and along its northern and northeastern margin there is a straight to curving drain (inhabited by *Typha orientalis* and *Carex*). Locally, in patches some 50 m x 20 m in size, the terrain has been cleared and invaded by weeds.

4.0 Wetlands in Lot 295

There are four wetlands on Lot 295 (Figure 2), that are either complete wetlands, or parts of wetlands that, while occurring on Lot 295, are actually mainly located outside the Lot. These are notated as Wetland # 1, Wetland # 2, Wetland # 3, and Wetland # 4 (Figure 2). All the wetlands are basins, and relative to the water table, they are classified as damplands (seasonally waterlogged) or sumplands (seasonally inundated), following the terminology of C A Semeniuk (1987).

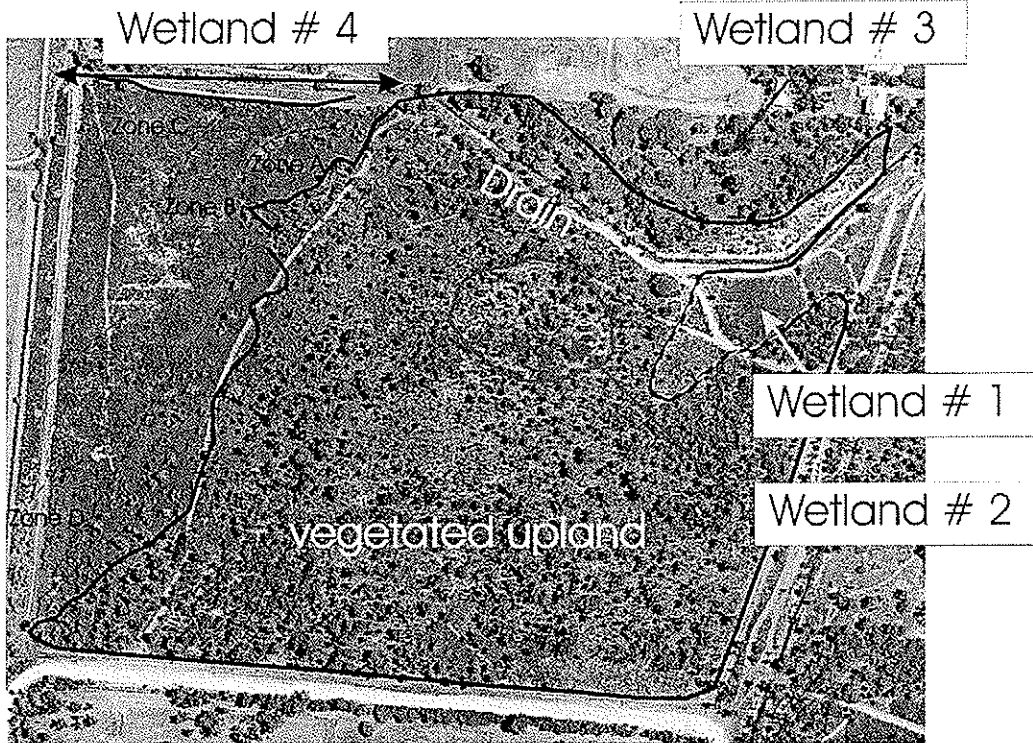


Figure 2: Annotated aerial photograph of Lot 295 showing location of the four wetlands, the vegetation zones in Wetland # 4, the extent of the upland vegetation, and the nature of the terrain traversed by a drain to the north and tracks throughout

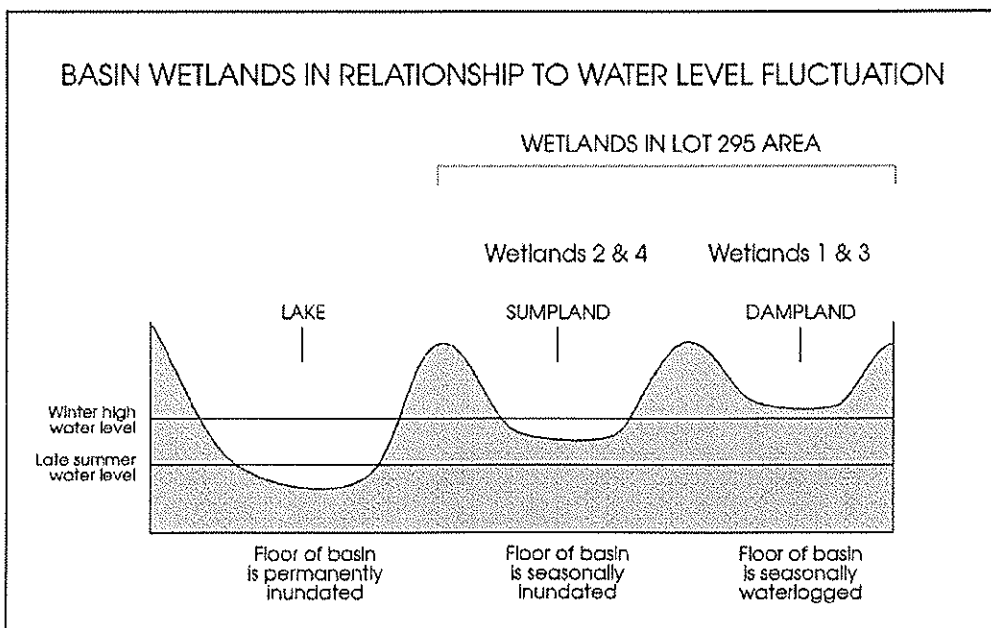


Figure 3: Wetland classification - nomenclature of basins with respect to their hydrological regime in relation to a fluctuating water table (after C A Semeniuk 1987)

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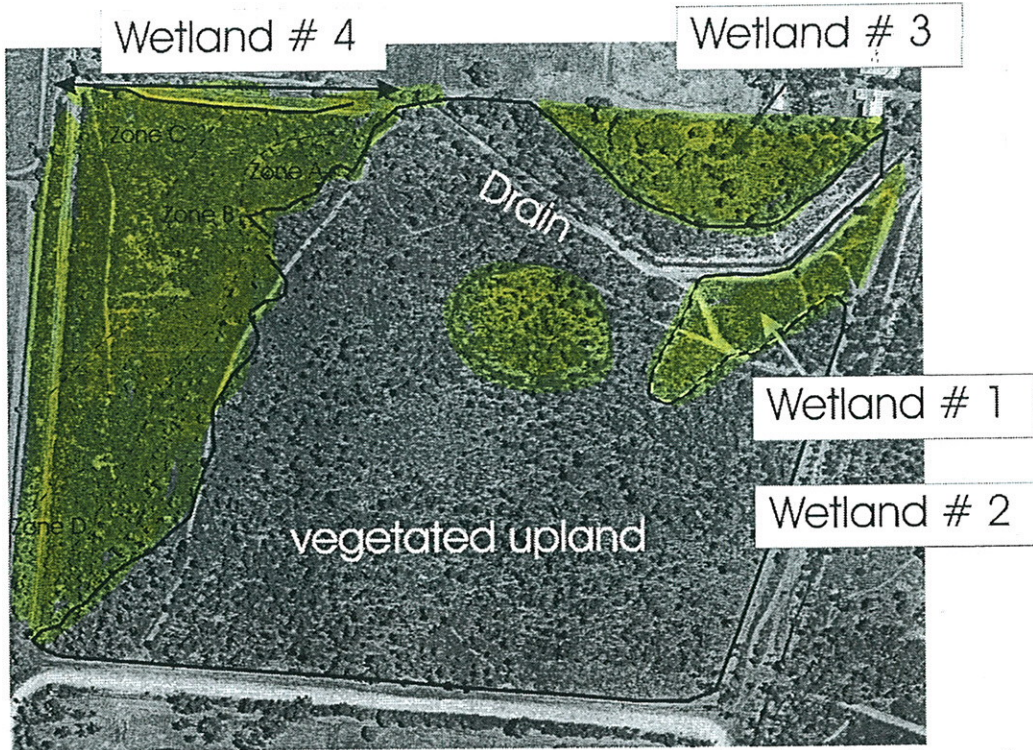


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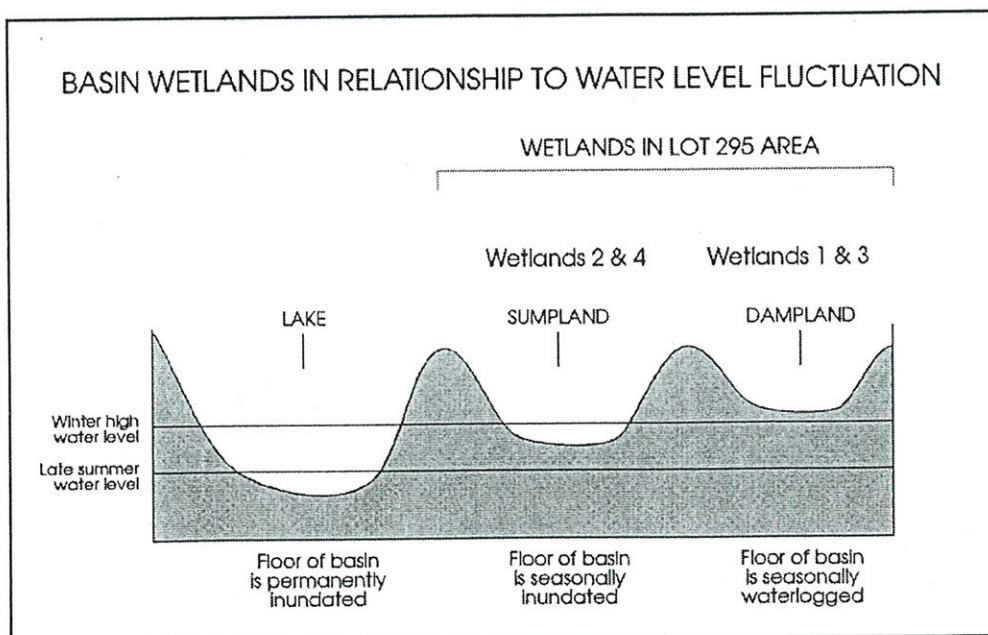


Figure 3: Wetland classification - nomenclature of basins with respect to their hydrological regime in relation to a fluctuating water table (after C A Semeniuk 1987)

Wetland # 1 is a medium sized elongate vegetated dampland, c. 200 m long and 50 m wide, trending northeast, in the northeast of Lot 295. It extends into the adjoining Lot; hence only part of the total wetland is on Lot 295. The wetland is underlain by humic quartz sand. The vegetation inhabiting the wetland consists of low open heath and sedge/land of *Pericalymma ellipticum*, *Dasypogon bromellifolia*, *Hakea varia*, with *Stylidium* sp, *Gompholobium*, *Stirlingia latifolia*, with some scattered *Jacksonia furcellata*.
Pericalymma ellipticum in this assemblage is the key species that indicates wetland conditions.

Wetland # 2 is a small circular forested sumpland, c. 100 m diameter, in the central northern part of Lot 295. The wetland is underlain by humic quartz sand and peaty sand. The wetland consists of closed forest of *Melaleuca pressiana*, *Kunzea ericifolia*, *Corymbia calophylla*, with a low open heath and sedge/land understorey consisting of floristic elements similar to Wetland # 1. *Melaleuca pressiana* is indicative of wetland conditions. #

Wetland # 3 is a medium sized forested dampland, c. 200 m in (sectorial) size, along the northern boundary Lot 295; only the southern sectorial margin of the wetland occurs in Lot 295. This wetland margin is underlain by humic quartz sand. *Melaleuca pressiana* is indicative of wetland conditions. This wetland margin is inhabited by an open forest to woodland of *Melaleuca pressiana*, with understorey of *Allocasuarina fraseriana*, *Xanthorrhoea preissii*, *Hypocalymma angustifolia* and *Dasypogon bromellifolia*.
Melaleuca pressiana in this assemblage is the key species that indicates wetland conditions.

Wetland # 4 is a large vegetated sumpland, c. 300 m long along the western part of Lot 295. The wetland is only partly present on Lot 295, and the remainder is cleared and on adjoining Lots to the northeast and west of Lot 295. The wetland is underlain by humic sand in its drier parts along the eastern margin, and by muddy and peaty sand in its wetter parts. Vegetatively, it is more complex than the other three, and is zoned, with a peripheral transitional zone (Zone A) on its eastern margin, a low heath to sedge/land (Zone B) on the inside of Zone A, a heath (Zone C) in one of its the wettest parts, and a heath/woodland (Zone D) in its other wettest part. Zone A is similar in vegetation to Wetland # 1 (viz., low heath/sedge/land of *Pericalymma ellipticum*, *Dasypogon bromellifolia*, *Hakea varia*) but additionally with *Anarthria* sp, *Leptospermum longitudinale*, and other sedges, and scattered trees of *Melaleuca pressiana* and *Corymbia calophylla*. Zone B is low heath of *Pericalymma ellipticum* with emergent *Viminaria juncea* and *Melaleuca pressiana*. Zone C is *Melaleuca viminea* closed heath 0.5-1.0 m high. Zone D is medium heath of *Melaleuca incana*, *Astartea facicularis*, *Leptocarpus* spp and other sedges, and overstorey of *Melaleuca pressiana*. # The species *Pericalymma ellipticum*, *Melaleuca pressiana*, *Melaleuca viminea*, *Viminaria juncea*, *Melaleuca incana*, *Astartea facicularis*, *Leptocarpus* spp, *Anarthria* sp, and *Leptospermum longitudinale* in this assemblage are the key species that indicate wetland conditions.

5.0 Soil and water details of the wetlands in Lot 295

Water table level, water moisture content, and wetland soil features were examined in wetlands 1, 2 and 4. Soil moisture in mid November 2005, and surface moisture content in the mid margin and southern part of Wetland # 4 in late November 2005 are presented in Table 1 below. Other relevant information on the wetlands is presented in Table 2 below. Figure 4A shows sponge spicules. Sponge spicules are particularly important as wetland indicators in that sponges require inundation, showing that the soil in which they are now occur has been inundated at some time recently (either seasonally, each year, or in the past 10-20 years in response to medium term climatic fluctuations. Figure 4B shows the phytoliths (silica inclusions in plant tissue that remains as residues after the decay of the plants) derived from wetland sedge plants; that in this case, are those occurring in the soil of Wetland # 1. The phytoliths indicate that there has been seasonal waterlogging, or at least waterlogging sometime in the recent past (say, 10-20 years ago, in response to medium term climatic fluctuations).

Table 1: Soil moisture (%) in the wetlands in Lot 295

Site and sample depth	% moisture	soil type	depth to water table
Wetland # 1: 0-10 cm	9.4	humic sand	
Wetland # 1: 20 cm	11.4	sand	
Wetland # 1: 30 cm	15.1	sand	
Wetland # 1: 40 cm (at water table)	20.2	sand	40 cm
Wetland # 2: 0-10 cm	37.9	peaty sand	
Wetland # 2: 20 cm	10.6	sand	
Wetland # 2: 30 cm	18.9	sand	
Wetland # 2: 40 cm (at water table)	22.7	sand	40 cm
Wetland # 4 (east margin): 0-10 cm	10.2	humic sand	
Wetland # 4 (east margin): 30 cm	7.1	sand	40 cm
Wetland # 4 (south): 0-10 cm	29.0	muddy sand	30 cm

Table 2: Information on the wetlands 1, 2 and 4 in Lot 295

Wetland	depth WT Nov 2005	phytoliths	sponges	implications
1	40 cm	sedges	no	water table depth in November indicates that the wetland would have been moist with high water table levels in winter; phytoliths show prevalent wetland plants
2	40 cm	sedges	yes	water table depth in November indicates that the wetland would have been moist with high water table levels in winter; sedge phytoliths indicate wetland plants are prevalent; sponge spicules indicate the wetland has been periodically inundated
4	30 cm	sedges	yes	water table depth in November indicates that the wetland would have moist soil with high water table levels in winter; phytoliths indicate wetland plants are prevalent; sponge spicules indicate that the wetland has been periodically inundated

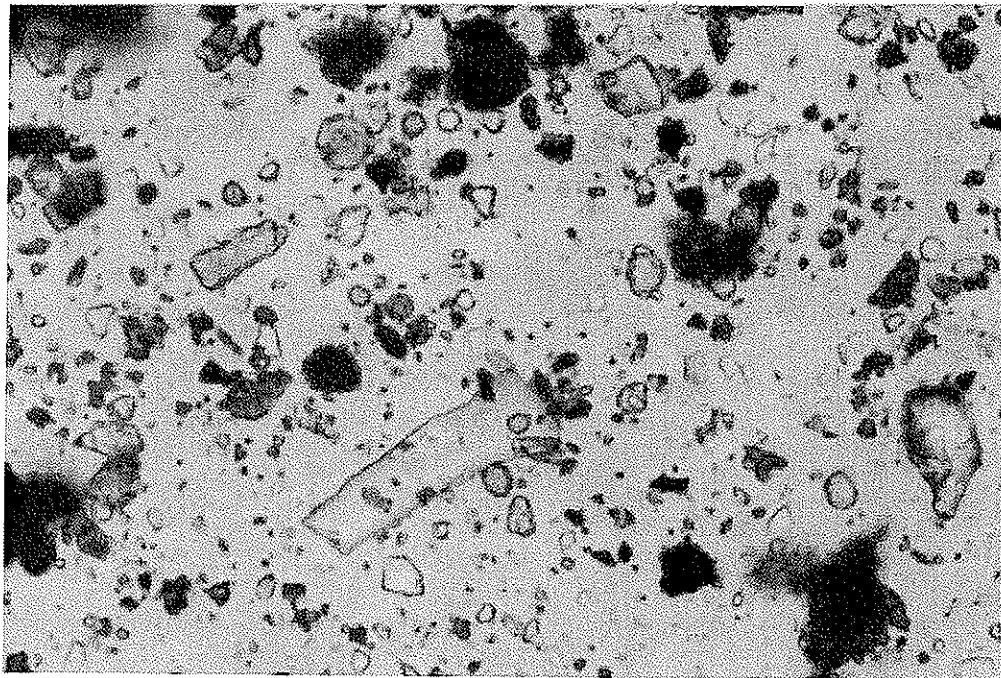
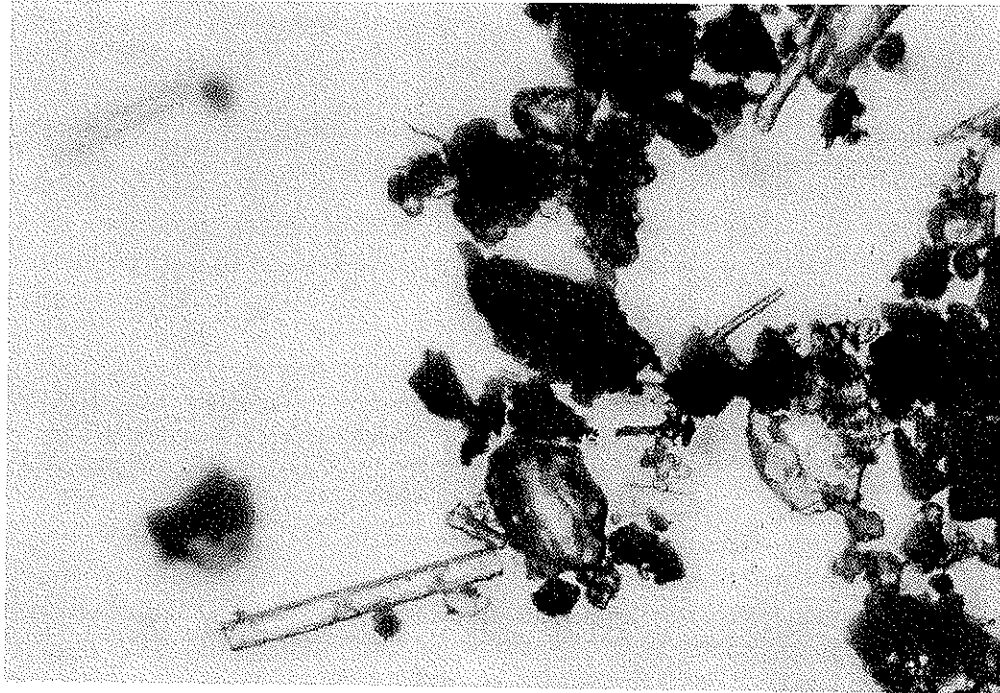


Figure 4: A (upper photograph) is soil under the microscope, from Wetland # 2, showing dark grains (organic matter), round/ovoid glassy grains (quartz sand), and glass-like rod (sponge spicule). B (lower photograph is soil from Wetland # 1, showing abundance of phytoliths (speckling of grains throughout the view).

7.0 Assessment of Lot 295

Lot 295 has a drain and numerous tracks traversing it. In addition, there are patches within the Lot that are invaded by weeds. However, for the larger part of its area, Lot 295 has remnant upland and wetland vegetation in relatively good condition.

No key,
What does that
mean?

8.0 Discussion and Conclusions

The main conclusions deriving from this survey are as follows:

1. on criteria of vegetation, depth to water table in November, soil moisture and soil particles, four wetlands are recognised as occurring on Lot 295;
2. these wetlands cover c. 45% of the area of Lot 295;
3. wetlands # 1, # 2 and # 4 have wetland vegetation in relatively good condition;
4. each wetland in Lot 295 is different in terms of its vegetation/floristic composition;
5. the upland vegetation is mainly jarrah, marri, sheoak assemblage;
6. the upland vegetation is variable in condition, but largely in relatively good condition.

In the context of your letter, with a request as to identifying which portions of the land are significant, I proffer the following. Wetlands # 1, # 2 and # 4 are regionally significant, as they are remnants of these types of wetlands in a region that is now largely cleared. Protection of these wetlands would require a buffer zone, which depending on details of intended land-use would range in width from 50 m to 200 m. Portions of upland terrain that have been partly cleared and that are partly invaded with weeds are not regionally significant. The wetland to the north, viz., Wetland # 3 also is not regionally significant.

9.0 References

McArthur W M & Bettenay E 1960. The development and distribution of soils of the Swan Coastal Plain, Western Australia. CSIRO Soil Publication No 16.

Semeniuk C A 1987. Wetlands of the Darling System - A geomorphic approach to habitat classification. Journal of the Royal Society of Western Australia 69: 95-111.

Semeniuk C A 1988. Consanguineous wetlands and their distribution in the Darling System, southwestern Australia. Journal Royal Society Western Australia 70: 95-111.

I trust that this letter report is to your satisfaction.

Yours sincerely,

Dr V Semeniuk
Director, VCSRG

KEIGHERY Bronwen

From: McLEOD- THORPE Glen
Sent: Tuesday, 9 November 2004 4:25 PM
To: KEIGHERY Bronwen
Subject: RE: Pinjarra

Thanks Bronwen,

I found a letter from the DEP to BSD (who were preparing the Pinjarra Urban Expansion Strategy on behalf of the Shire) dated 8 October 1997 which says:

"There is another significant area of remnant vegetation on land owned by the Murray Districts Aboriginal Association, Homeswest and DOLA on Hampton Road, and a block of Homeswest land on Alderson St (also indicated on the attached map). **This area is likely to be identified as land of regional conservation significance** and the DEP suggests that it be **proposed for reservation** in the urban expansion strategy."

The map shows the subject lot marked as 'bushland of regional significance'.

I also got information from Peter Robertson re: when he bought the land etc.

Marie is going to discuss with Kim tomorrow. Please speak to Marie about this if you need to during my absence until 1 December.

As for that manila file 98, no I have not seen it sorry.

I will be in on Friday for the cake bake-off, I hope your branch is entering!?

Thanks.

Glen

-----Original Message-----

From: KEIGHERY Bronwen
Sent: Tuesday, 9 November 2004 16:16
To: McLEOD- THORPE Glen
Subject: Pinjarra

Hi Glenn

All I can locate at present is a letter to Homeswest (Attached) ie they were well aware in 1995 that we had an interest in the area. We do have an informal file on the bigger area which may well have notes in it but I cannot locate it. John thinks we may have lent it to an officer working on it previously and you may have it. It was in a cream manila folder marked as Submission 98.

Cheers Bronwen

<< File: Pinjarra Homeswest.DOC >>

PS Have a great day on Saturday and a fantastic holiday.

Bronwen Keighery
Senior Environmental Officer
Terrestrial Ecosystem Branch
Policy and Coordination Division
EPA Service Unit
Department of Environment
Telephone 9222 7028
Fax 9322 2850

KEIGHERY Bronwen

From: LAWN Justine
Sent: Wednesday, 5 January 2005 12:02 PM
To: McLEOD- THORPE Glen; KEIGHERY Bronwen
Subject: Pinjarra Alderson Ministerial

Importance: High



message.txt



tOIDHON6.tif

i Bronwen and Glen,
I hope you both had a great break over the festive season!

Sorry to be the bearer of bad news, but ministerial 0011/05 re Alderson St, Pinjarra has just landed on my desk (copy attached). It is due on the 17th. It needs a joint response from Terrestrial and Wetlands as it is requesting an independent reassessment of the wetland and vegetation assessments by an independent party (Geoff Bott has been suggested by Dykstra and Associates). This appears to be a spin off of Dykstra's awareness of the Campbell Estate fiasco. Glen I don't know if you would like to provide a position in relation to the EIA process?

Wetlands can coordinate the response, with sign off by Greg Davis, if Bronwen you can provide some words re: your position on the proposed independent reassessment of the vegetation. I expect that Natalie will not support the suggested independent assessment, but I won't know her position until she arrives back on Monday.

This apparent trend of appealing to the Minister's office for independent review is undermining the Wetlands Program's ability to proactively develop more transparent mechanisms for re-evaluations and reclassifications. Also, it would appear that Dykstra presumes that we will foot the bill for this review, which is an extremely bad precedent set by the Campbell Estate fiasco.

Thanks,
Justine.

Justine Lawn
Acting Senior Environmental Officer
Wetlands Program
NRM and Salinity Division
Department of Environment
Level 2 Hyatt Building, 3 Plain St East Perth WA 6004

0011/05



Our Ref: 02/201/041222L - Environment

6/2954 Albany Highway
Kelmscott WA 6111
PH: 08 9495 1947
FX: 08 9495 1946
ABN 26 435 874 717
dykstrah@ozemail.com.au

22 December 2004

22/12/04

Hon. Minister for Environment
Office of the Minister for Environment
Westralia Square
Bldg. 141
St. George's Terrace
PERTH WA 6000

Attention: Jeff Camkin

RECEIVED	
MINISTER'S OFFICE	
DOC	<input type="checkbox"/>
DEWCP	<input checked="" type="checkbox"/>
EPA	<input type="checkbox"/>
CCOM	<input type="checkbox"/>
OWR	<input type="checkbox"/>
BGPA	<input type="checkbox"/>
ZOO	<input type="checkbox"/>
GRAPH	<input checked="" type="checkbox"/>
ADVICE/BN	<input type="checkbox"/>
NOTE/FILE	<input type="checkbox"/>
DIRECT	<input type="checkbox"/>
ACK	<input checked="" type="checkbox"/>
COPY	<input type="checkbox"/>
31 DEC 2004	
REC NO.	30452
REQUIRED BY	25/1/05

Dear Sir

RMD 21.1.05.
REL 4293/03
1782/04

Proposed Rezoning
Lot 295 Alderson Street, Pinjarra

I refer to your recent discussions and meeting with Mr Peter Robertson in relation to the presence of wetlands on the abovementioned lot and the implications of same in terms of the Environmental Protection Authority's assessment of this proposal.

It is understood advice from the Environmental Protection Authority has now been forwarded to the Minister, with a recommendation that the proposed rezoning cannot be environmentally acceptable.

As discussed, our client has previously engaged an Environmental Consultant, Landform Research, to prepare a detailed Wetland and Vegetation Assessment of the site as requested by the Department of Environment.

In correspondence dated 19 November 2004, the Department of Environment advised that the conclusions in the report prepared by Landform Research were, in general, not supported.

A copy of this correspondence is attached as **Appendix A**.

Given the apparent inconsistency between the findings reported by Landform Research and the Department of Environment botanist, we seek your confirmation that it would be appropriate to have the respective assessments, and site, reassessed by an independently appointed, suitably qualified Environmental Consultant.

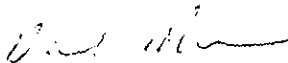
Such an independent assessment could then assist the Hon. Minister in making an informed decision with respect to this proposal.

Our recommendation would be that Mr Geoff Bott of Parson's Brinckerhoff be independently appointed by the Department of Environment, given his experience in this field and involvement in the preparation of the following Policy documents:-

- Guidelines for Wetland Management on the Perth Swan Coastal Plain (EPA, Bulletin 685, 1998);
- The EPA's Position Statement on Wetland Protection, 2001; and
- Environmental Protection (Swan Coastal Plain Lakes) Policy, 1992 – a statutory policy for the protection of some 5,000 wetlands located on the Swan Coastal Plain, WA (Government of WA, 1999).

Your earliest response to this correspondence would be greatly appreciated.

Yours faithfully



David Maiorana
Senior Town Planner

cc: Peter Robertson



Department of
Environment

Your ref: 02/201/031110L - W&RC
Our ref: 15849V9
Enquiries: Justine Lawn
Direct tel: 9278 0451

02
03

Henry Dykstra
Dykstra & Associates
6/2954 Albany Hwy
KELMSCOTT WA 6111

Dear Mr Dykstra,

RE: REQUEST TO CHANGE THE GEOMORPHIC WETLANDS SWAN COASTAL PLAIN DATASET FOR LOT 295 ALDERSON ST, PINJARRA (UFI 5192, 5193 & 13913)

I refer to your correspondence of 10 November 2003 requesting changes to the boundary delineation and management category of wetlands on Lot 295 Alderson Street, Pinjarra. The Department of Environment (DoE) has also considered subsequent correspondence from Dykstra & Associates (4 March 2004) and Landform Research (11 June 2004).

The request relates to the wetlands identified by the unique feature identifier (UFI) numbers 5192, 5193 & 13913 within the *Geomorphic Wetlands Swan Coastal Plain* dataset (Department of Environment, 2004). These wetland areas were originally identified as MIN 643 P (portion) and 505 D of Map Sheet 2032 I SW of the *Wetlands of the Swan Coastal Plain. Volume 2B Wetland Mapping, Classification and Evaluation. Wetland Atlas* (Hill, Semeniuk, Semeniuk, & Del Marco, 1996).

The DoE has reviewed the information contained within the correspondence listed above and has undertaken a site visit. The DoE provides the following assessment of the wetland re-evaluation request:

Wetland identification and boundary delineation

Wetland identification is based upon characteristics of hydrology, hydric soils and vegetation (Hill *et al.*, 1996) and consideration of long term climatic patterns (EPA, 2004). The DoE does not support the reclassification of a wetland to 'no longer a wetland' without comprehensive justification.

The proposed reclassification of a large portion of the palusplain to upland is not supported by the DoE. The submission states that those areas which are proposed to be reclassified do not support wetland dependent vegetation. This information has been reviewed by a DoE botanist and in most of the relevant areas, this conclusion is not supported. The exception is an area identified by Landform Research as *Kunzea ericifolia* Thicket, which has been identified as upland vegetation.

Westralia Square
Level 8 141 St Georges Terrace
Perth Western Australia 6000
PO Box K822 Perth Western Australia 6842
Telephone (08) 9222 7000 Facsimile (08) 9322 1598
E-mail info@environment.wa.gov.au
www.environment.wa.gov.au



Hyatt Centre
Level 2 3 Plain Street
East Perth Western Australia 6004
PO Box 6740 Hay Street East Perth Western Australia 6892
Telephone (08) 9278 0300 Facsimile (08) 9278 0301
National Relay Service (Australian
Communication Exchange) 132 544
E-mail info@environment.wa.gov.au
www.environment.wa.gov.au

Desktop analysis of landform, and ground truthing of landform, soils and vegetation in the field, have been used by the DoE to determine that the current wetland boundaries require modification. Figure 1 presents the updated wetland delineation. The delineation of wetland boundaries reflects the occurrence of wetlands between parallel ridges running approximately north-south across the property.

Classification

The geomorphic classification (ie, type) of wetland has not been determined due to a lack of information regarding the hydrological regime of the site. The DoE understands that the evaluation of the wetlands on site is most relevant at this time given the referral of the associated rezoning to the Environmental Protection Authority.

Evaluation

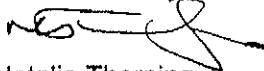
The DoE concurs with Dykstra and Associates' proposed evaluation of the western wetland area as significant on the basis of natural values and representativeness.

Desktop analysis and field verification of the values of the newly identified wetland areas has been undertaken by officers of the Wetlands Program and the Terrestrial Ecosystems Branch of the DoE. The newly identified wetland areas have been determined to be significant on the basis of naturalness, reflected by the quality and diversity of vegetation, contiguity with upland vegetation, context of the remnant's values within a highly cleared landscape, habitat values and presence of significant flora. The wetland areas are also valuable on the basis of their representativeness of the wetland suite-type group.

On this basis, all wetlands on site have been recognised as Conservation category wetlands and the *Geomorphic Wetlands Swan Coastal Plain* dataset (DoE) has been updated to incorporate these changes. The management category is displayed in Figure 1, attached.

Please contact Environmental Officer Justine Lawn on 9278 0451 if you require further information on this matter.

Yours sincerely,



Natalie Thorning
Acting Coordinator, Wetlands Program

19 November 2004

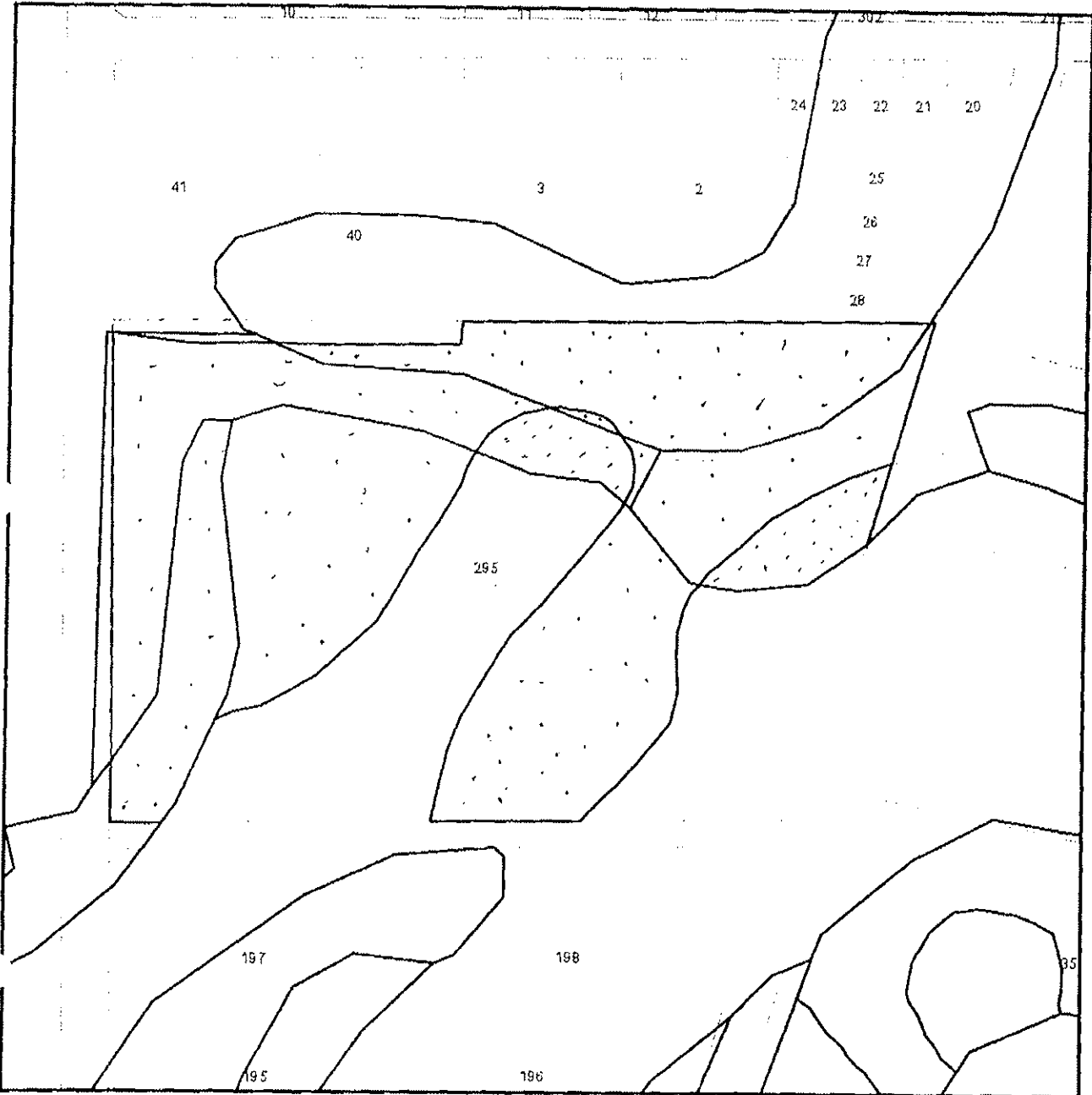
References:

Department of Environment (2004) *Geomorphic Wetlands Swan Coastal Plain* dataset.





Environmental Protection Authority (2004) *Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy and Regulations 2004 Explanatory Document*. Government of Western Australia, Perth.

Hill A. L., Semeniuk C.A., Semeniuk V. and Del Marco A. (1996) *Wetlands of the Swan Coastal Plain Volume 2A: Wetland Mapping, Classification and Evaluation*. Water and Rivers Commission and Department of Environmental Protection, Perth.

Sketch- revised boundaries



LEGEND

-  Cadastral - DLI 1/09/04
-  Conservation
-  Multiple Use
-  No longer a wetland



Geocentric Datum of Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: Lawnd
 Prepared for:
 Date: Thursday, 25 November 2004 18:27

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



WA Crown Copyright 2005

25/10/2004 (Monday)

Lot 275 Allocation at Field 1814

DSE: Justine Lawry, Glenn McLeod-Murphy, Rika, Ghaz

- detailed notes with Justine & Glenn
- Met Lane over camp
- traversed site - foot, vehicle
- photos on disc 2226 - 2246, plus Justine's
- see notes on report
- Field boundaries (or well-head) outlined by Justine.

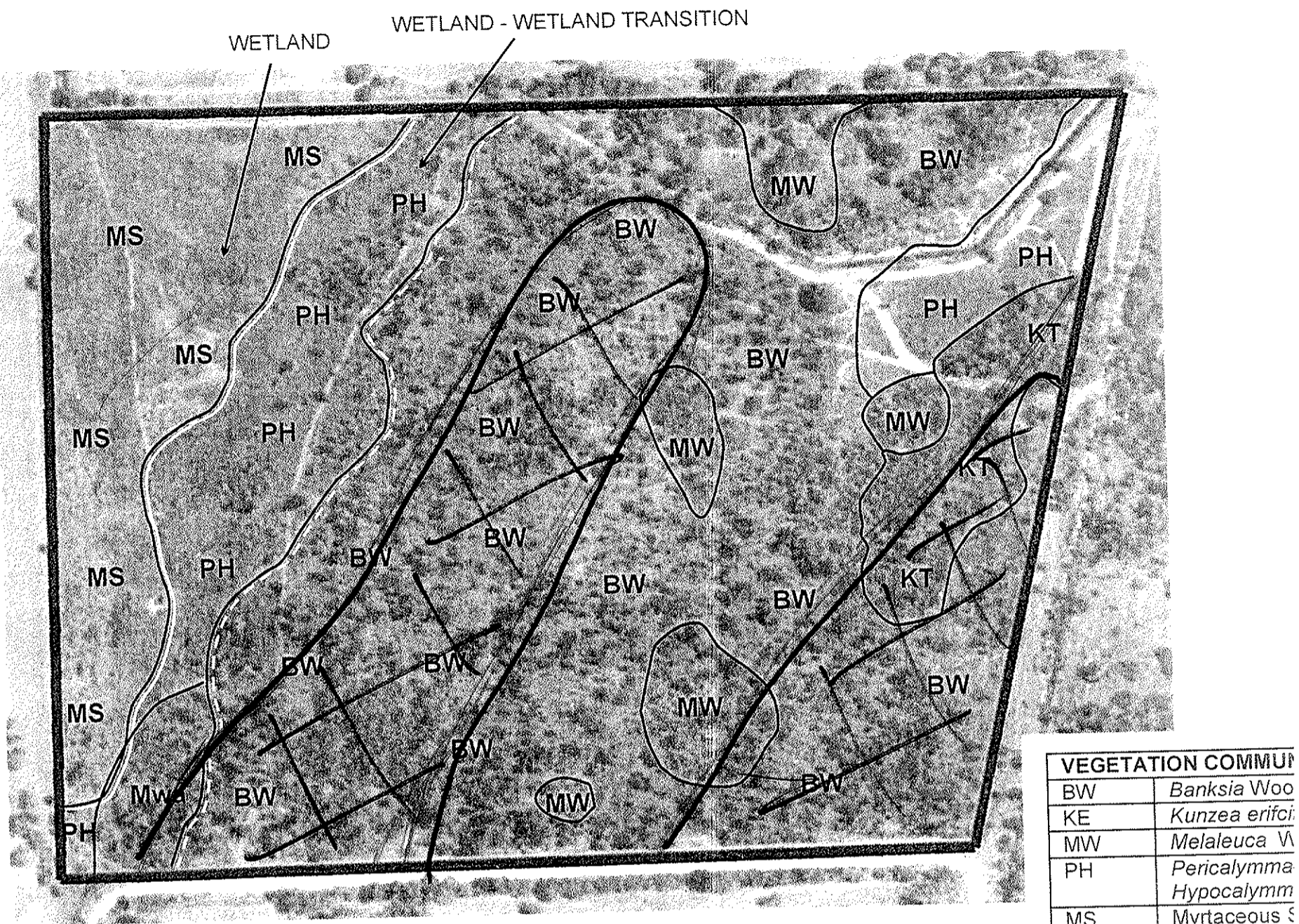


FIGURE 1

VEGETATION ASSESSMENT - LOT 259, ALDERSON ROAD, PINJARRA

100 metres



Feb

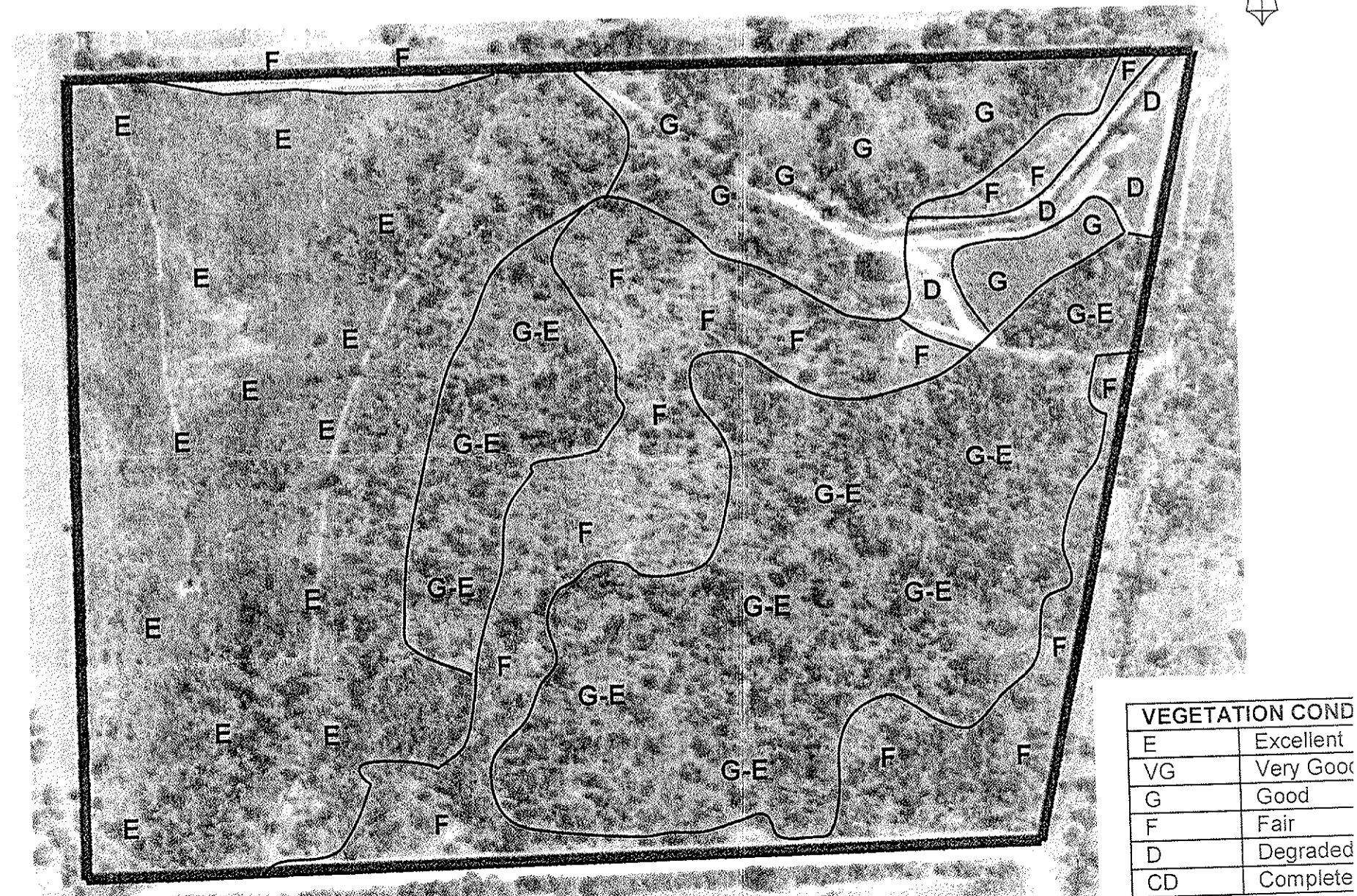


FIGURE 2



Sporeviccia

photo # 213



LEGEND
 1:25000
 1:25000
 1:25000
 1:25000

Photo # 1
 white deep
 sand.



Scale 1:25000
 Aerial photograph reproduced at 100%
 Geographic Datum of Australia 1984
 Note: the data in this map have not been
 projected. This may result in geometric
 distortion or measurement inaccuracies.
 Prepared by: I. Smith
 Boarded by: [unclear]
 Date: Friday, 22 February 2004 10:31

Information on this map should be
 confirmed with the data custodian as acknowledged
 by the agency acronym in the legend.



* Bronwen's photos

Photo # 4
 Mavri bankia



Scale
1:50,000

Photo
White
300



Source: USGS
Map Date: 1998
Map Scale: 1:50,000
Map Projection: UTM
Map Datum: WGS 84

Copyright: 2000
USGS
Map Date: 1998



* Cronner's photos

Wetland Evaluation Lot 295 Alderson St



LEGEND

 Cadastre - DLI 1/03/04

 Conservation

 Multiple Use

Swan Coastal Plain South 1m Orthomosaic - DLI 03



Geospatial Datum of Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: LawnJ
Prepared for: B. Keighery
Date: Wednesday, 30 June 2004 10:08

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.




WAG001/03/04/2003

Wetland Classification Lot 295 Alderson



LEGEND

 Cadastre - DLI1/03/04

 Dampland

 Palusplain

Swan Coastal Plain South 1m Orthomosaic - DLI03



Geometric Datum of Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: LawnJ
Prepared for: B. Keighery
Date: Wednesday, 30 June 2004 10:06

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



WA D L W I C 0 3 0 1 2 2 0 3

Record of Telephone Call

Call from	Call to Alan Diggins	Folio No.
Dept	Dept HOMESWEST	File No.
Subject INFORMATION ON SURVEY	Date 30/1/98	Time

Details

- Pinjarra lands on Alderston / Herapton Rd
- DEP Submission to MCP/WAPL identified to as 'conservation value = natural resource protection' ie how will be used in
- Homeswest looked at Peel Region Plan and this - suitable for urban in 2 categories
- Homeswest would like to know basis of decision ie biological information
- Spoken with Kieron B & Cliff L.
- BSD consultants 'Urban Exp' Study for Shire of Murray 'Natural Resource Protection' still this, considered 2nd wk Feb.

Action taken/Recommendation(s) (where applicable)

FAR Map comments as soon as possible.

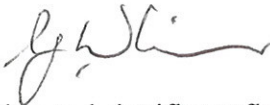
Approval (if required)



Department of Environmental Protection

Westralia Square, 8th Floor, 141 St Georges Terrace, Perth WA 6000

MEMORANDUM
Terrestrial Ecosystem Branch
DEPARTMENT OF ENVIRONMENT

ATTENTION: Justine Lawn
FROM: Bronwen Keighery 
DATE: 14th October 2004
SUBJECT: Upland and wetland vegetation and significant flora in Lot 295
Alderson Street Pinjarra

Wetlands (extracted from a report in preparation on the regional significance of Lot 295 Alderson Street and adjacent bushland, Pinjarra)

Vegetation and Extent

Based on the interpretation of high resolution aerial photography about 50% of Lot 295 appears to be wetland. Two low sand ridges cross the Lot in a southeasterly direction. Two wetland areas are evident between these low dunes.

Wetland 1

To the west of the western sand ridge is a well-defined wetland area. From the vegetation and soils described (Landform Research 2004a) and the aerial photography this wetland appears to be dependant on waterlogging/inundation both groundwater and perching. Landform Research 2004a maps three wetland units (MS, PH and Mwa) in this area.

Wetland 2

Between the western and eastern sand ridges there appears to another wetland. From the vegetation and soils described (Landform Research 2004a) and the aerial photography this appears to be dependant on groundwater. Landform Research 2004a maps three units (MW, PH and KT) in this area and suggests that only one of these units indicates the presence of wetland vegetation. This position is based on the presence of species in the MW and KT units that are considered upland species. However most of these species can occur in both upland and wetland units. Some, such as *Banksia attenuata* and *Allocasuarina fraseriana* occur in low numbers in wetlands, others such as *Dasypogon bromeliifolius*, *Phlebocarya ciliata*, *Acacia pulchella* and *Xanthorrhoea* species are common in wetlands, particularly damplands. However there are also a series of key wetland species in these units such as *Melaleuca preissiana*, *Aotus gracillima* and *Hypocalymma angustifolium*.

The WRC Wetland mapping maps most of Wetland I and a portion of Wetland 2. However this mapping shows them as being contiguous in the northern section of the Lot through areas mapped by Landform Research 2004a as BW. A drain is located in this area and may be contributing to the different interpretations. Further fieldwork is required to map the extent of Wetland 2 and the extent of wetland/upland in the northern 'drain' area.

Significant Wetland Flora

Landform Research 2004a lists 111 species for the area, one of which is a weed. This is expected to represent about 70 -80% of the expected flora. This list includes a large number of significant taxa (Government of WA 2000, DEP 1996, Keighery and Trudgen 1994 and Florabase records). Ten of these species are associated with wetlands, being: *Craspedia argillicola* (currently known from only two wetland areas on the eastern side of the Swan Coastal Plain, likely to be recommended for listing as DRF), *Myriocephalus appendiculatus*, *Podolepis gracilis* (located in the wetland, expected to be the Swamp form), *Mesomelaena tetragona*, *Acanthocarpus canaliculatus*, *Haemodorum simplex*, *Ottelia ovalifolia*, *Beaufortia elegans*, *Jacksonia sericea* (most likely *J. gracillima* (*J. gracilis* in Government of WA 2000) and *Meeboldina decipiens* subsp. *decipiens* (less than herbarium 10 records on the Plain). This high number of conservation significant species indicates the high value of the wetlands.

Information sources (for a full listing of most references see *Bush Forever: Volume 2* Government of WA 2000: Aerial photography over several years, Landform Research 2004a&b, WRC 200?, DEP 1996 and Keighery and Trudgen 1994, Florabase records, Government of WA 2000 and Marchant *et al.* 1987.

FAX TRANSMISSION

CHRIS SWIDERSKI

HOMESWEST LAND PLANNING BRANCH

99 PLAIN STREET, EAST PERTH WA 6004

PH: (08) 9222 4835

FAX: (08) 9222 4754

email: cswiderski@homeswest.wa.gov.au

fax 9485 1187

To: DEP Bronwen Keighrey Date: 29/1/98

Fax #:

Pages: 2, including this cover sheet.

From:

Alan Diggins
~~Chris Swiderski~~
Land Planner

Subject:

*Vegetation/Environmental Assessments
lots 295 & 296 Pinjarra.*

COMMENTS:

As discussed.

*Could you please advise and provide
copies of assessment studies that
may refer to vegetation on the
these lots*

Plan follows.

*Thanks
You
Alan Diggins*

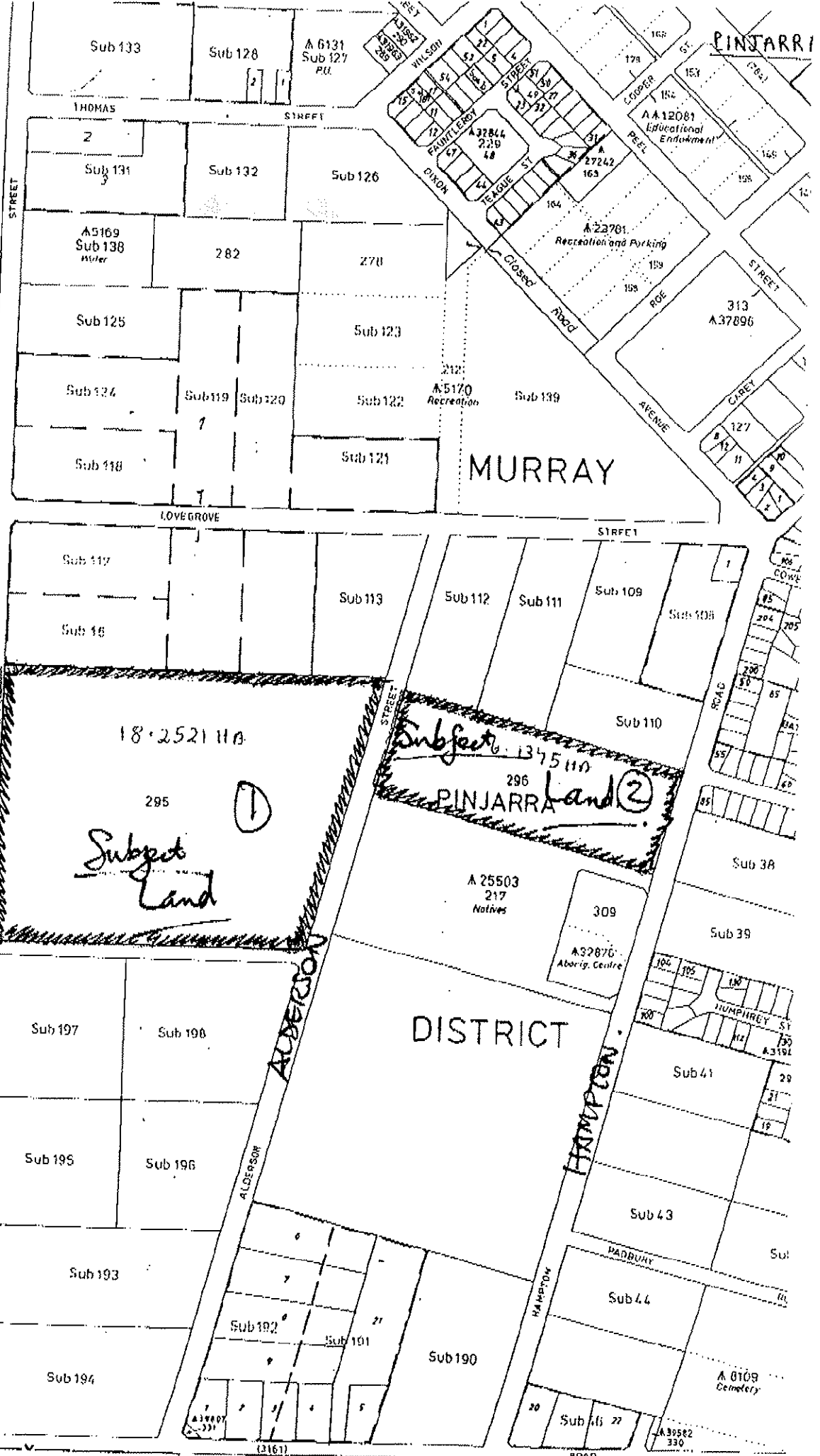


HOMESWEST
HOUSING
PRODUCTION

99 PLAIN STREET
EAST PERTH
WESTERN
AUSTRALIA
6004

TELEPHONE:
222 4800

FACSIMILE:
222 4653



20/11/97

THREATENED ECOLOGICAL
COMMUNITY - PINJARRA 1

Western tongue of area
(over a month ago)
Vol English reported had been
'fire breaked'. Fire break? 40m.

Not sure of details, needs
checking with Shine what is
being done in the area.

Kevin Mac Alpine spoke with
Shine, possibly correspondence
on area. I think it is a
'reserve' which they wished to
re-zone to Industrial.

Copy
To/ke passed
on. Thanks
Brown.



Record of Telephone Call

Call from Natalie Thorning Dept DEP	Call to Mrs Currie Dept PINJARAA 2	Folio No.
Subject SYSTEM 6 UPDATE - FLORA SURVEY	Date 14 / 11 / 95	File No.
		Time 10.25am

Details

Lot 350 Hampton Rd, Pinjarra
owned by DOLA
leased by JSB + MH Currie
PO Box 242, Pinjarra 6208.
ph: 531 1918

Rang to let know would be doing vegn survey
work Friday 17/11. DOLA had already
informed them.

Said will probably be there in the morning
they would like us to call at home on
the way in. Will be there all day.

Action taken/Recommendation(s) (where applicable)

Approval (if required)



Department of Environmental Protection

Westralia Square, 8th Floor, 141 St Georges Terrace, Perth WA 6000

Record of Telephone Call

Call from Natalie Thorning	Call to Theo	Folio No.
Dept DEP	Dept Murray Districts Aboriginal Association	File No.
Subject SYSTEM6 UPDATE - FLORA SURVEY	Date 14 / 11 / 95	Time 11:35 am

Details

bushland North of Lot 350 Hampden Rd.
Theo - 531 2513
man who previously showed us the bushland
of these lots 31/8/95.

Arranged to visit on Friday, mid morning
+ asked for us to call in.

Action taken/Recommendation(s) (where applicable)

Approval (if required)



Department of Environmental Protection

Westralia Square, 8th Floor, 141 St Georges Terrace, Perth WA 6000

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

Please address all enquiries to:

Swan Region
3044 Albany Highway
KELMSCOTT WA 6111
Ph: 09 390 5977 Fax: 09 390 7059

Your Ref:
Our Ref:
Enquiries:

SR: ~~9792~~ 82109

┌ Kevin McAlpine ┐
Department of Environmental Protection ┐
Westralia Square ┐
141 St Georges Terrace ┐
└ PERTH WA 6000 ┘

Dear Mr McAlpine

My officers have been dealing with DOLA on the issue of a grazing lease and the future tenure for the townsite Lot 350 Hampton Road, Pinjarra. Paul Brown has indicated that Lot 350 has been nominated for the System 6 Update program as "Area 98". Could you let Mr Brown know if you have or intend to survey the area in Spring 1995 in your field assessment for the Update.

CALM will be recommending the termination of the grazing lease, however we are unsure of the future tenure for the reserve. The Lot is on the eastern side of the Swan Coastal Plain, but has been degraded in patches. The issue is that if the area was recommended by DEP as very important then CALM would follow up vesting in the NPNCA. However, if it can be adequately protected under another vesting we would support the Shire of Murrey gaining vesting.

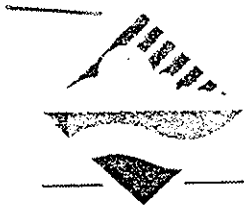
The main contacts for the site are:

- Mr Paul Brown, CALM Kelmscott
- Mr Bob Hamilton, DOLA, Bunbury Regional Office, 61 Victoria St, BUNBURY, 6230
- Mr and Mrs Currie, PO Box 242, PINJARRA, 6208 (the lessees)

Thank you for your assistance.

Yours faithfully

for Syd Shea
Executive Director
19 October, 1995



Head Office:
3rd Floor, Westralia Square
141 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 7000 Fax (09) 322 1598

Waste Management Division:
Ground Floor, 32 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 0422 Fax (09) 222 0455
or PO Box Y3030, East St Georges Terrace
Perth, Western Australia 6832

Regional Offices:
Bunbury • Karratha • Kalgoorlie • Kwinana

Mr Joe Lee
Murray Districts Aboriginal Association
PO Box 273
PINJARRA WA 6208

Your Ref

Our Ref

Enquiries

67/91

N Thorning

Dear Mr Lee

FLORA LIST FOR LOT 350 HAMPDEN RD - SYSTEM 6 UPDATE

I apologise for the delay in reply to your request for a flora list for Lot 350 Hampden Road, Pinjarra. Having gained permission from the land owner, I enclose a copy of the site based flora list generated from two sites visited on the 17 November 1995.

Please refer to the sources, as stated below, each time this data is used:-
Department of Environmental Protection 1994 - 1996 System 6 Update. Unpublished site records.

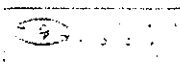
For any additional information please don't hesitate to contact Bronwen Keighery (222 7184) or Natalie Thorning (222 7051).

Yours sincerely

R.A.D. Sippe
DIRECTOR
POLICY COORDINATION DIVISION

24 May 1996

c.c. Department of Land Administration



Lot 350 Hampton Rd, Pinjarra - Leased by:-
J.S.B & M.H. Currie, PO Box 242, Pinjarra 6208
531 1919

lots 299 + 309 Hampton Rd, Pinjarra -
Aboriginal Lands Trust, PO Box 273 Pinjarra 6208

Lot 296 Hampton Rd, Pinjarra -
State Housing Commission, 99 Plain St, East Perth 6000

Lot 217 Alderson St, Pinjarra -
Aboriginal Lands Trust, PO Box 273, Pinjarra 6208

Lot 295 Alderson St, Pinjarra -
State Housing Commission, 99 Plain St, East Perth 6000

[Lot 52 Old Mandurah Rd, Ravenswood -
K.R. Tyler & J.W. Sully, 21 Camden St, Wembley
Downs 6019 537 6135 next to
Ravenswood Speedway]

Lot 2 Old Mandurah Rd, Ravenswood -
Gary Payne Nominees Pty Ltd, 607 Pinjarra Rd,
Sunnysdale 6210

Theo 531 2513

Murray Districts Aboriginal Association

Ravenswood Speedway
Gary Miorcevic 354 2599

537 8383
Kim Treasure Cma
Mand 43 Boundary Rd
535 1493

BUSHLAND AREA PINDARRA 2 = HAMPTON SITES

YES/NO

DATE 17/11/95 RECORDERS BJK

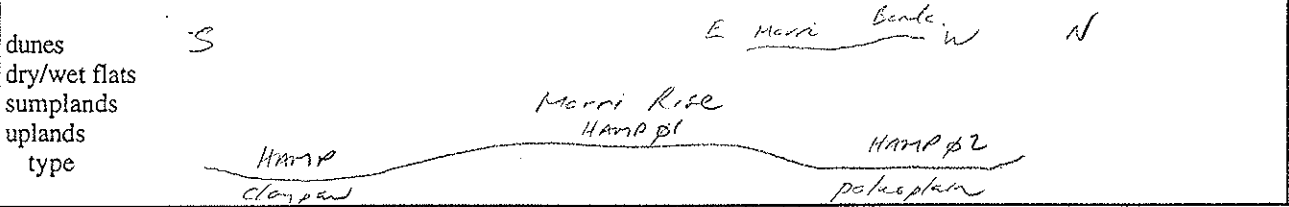
Observations edge transects

Geographic Location Latitude S Longitude E

Reference Map

Photograph Photographer's Name Photo No

Transect of landscape units



Soil Exposed rock type % area Colour

VEGETATION

Eucalypts	<i>E. calophylla</i>	<i>E. wandoo</i>	<i>E. marginata</i>	<i>E. todtianna</i>	<i>E. rudis</i>
	<i>E. decipiens</i>	<i>E. drummondii</i>	<i>E. haematoxylon</i>	<i>E. lanepoolei</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>M. raphiophylla</i>	<i>M. lanceolata</i>	<i>M. cuticularis</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>

Vegetation Condition - Keighery 1994 (Trudgen 1993)

1 = 'Pristine' (Excellent)	} Condition variable, edge invasion from tracks, fire breaks, drains and grazing
2 = Excellent (Very Good)	
3 = Very Good (Good)	
4 = Good (Poor)	
5 = Degraded (Very Poor)	
6 = Completely Degraded	

partial clearing - assoc grazing, Aboriginal developments, service corridors

weeds *Watsonia*, *P. Veldt Grass* see site notes

Leucaena carinata (claypan), pasture (claypan)

selective removal of species timber cutting mowing % dieback

fire frequency infrequent

'enrichment plantings' NA

animal impact horse foxes rabbits cats dogs goats pigs overgrazing by native mammals

soil movement mining dumping rubbish dumping roadworks

changes in water regimes flooding drainage watering nutrient influx

Tracks fire breaks walk trails off road vehicle use animal tracks

Service corridors SEC Main Roads Water Authority Telecom

Other DRAINS FIRE BREAKS

BUSHLAND PLANT SURVEY RECORDING SHEET 1- use pencil only

HAMP 02

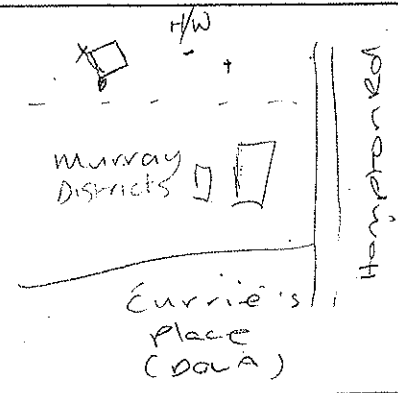
USHLAND AREA HAMPTON RD SITE NUMBER ~~1202~~
 DATE TRIP 17-11-95 RECORDERS BJK NGR TS
 DATE TRIP _____ RECORDERS _____
 DATE TRIP _____ RECORDERS _____
 BOTANIST _____

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 24 Neelands WA 6008.

LOCATION of the QUADRAT

Field Map Draw a sketch of the location of the site below.

o *Melaleuca preissiana*
 x *Acacia saligna*

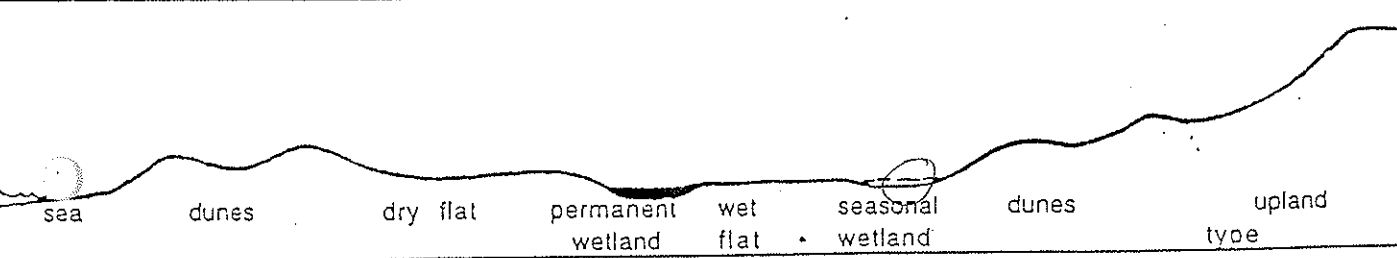


Road Location Hampton Rd

Geographic Location Latitude 32° 38' 026 S Longitude 115° 51' 807 E Altitude
 Reference Map EPE 182 m

Photograph Photographer's Name TS Photo No 24

Topographic position Circle position of site on the transect (alter the transect if necessary)



2. SITE DATA Circle the correct response.

Slope flat gentle steep Aspect N NE E SE S SW W NW

Surface Soil sandy clay Colour _____
 Exposed rock type _____ % surface _____

Sub-surface Soil Colour _____
 Rock type _____ depth to rock _____

Drainage well mod poor depth water _____ cm Wet all year winter/spring

Litter	2-10	% cover	Bare Ground	2	% cover
Depth	< 1	cm			






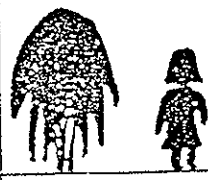




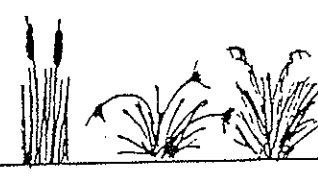


BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of W.A. Inc., PO Box 64 Nedlands W.A. 6008.

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below), and dominant species in each layer.

Cover Class 2-10% 10-30% 30 - 70% over 70%

TREES			MALLEES		
over 30m	15 - 30m	5 - 15m under 5m	over 8m	under 9m	
LIFE FORM					
COVER CLASS (%)		2-10			
DOMINANT SPECIES		<i>Metaleuca</i>	<i>priessiana</i>		
SHRUBS			SHRUBS		
over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m	
LIFE FORM	open low scrub A 	Dense Heath B 			
COVER CLASS (%)	2-10	70+			
DOMINANT SPECIES	<i>Hakea sulcata</i>	<i>Pericalymene</i> <i>verticordia densi</i>	<i>ellip.</i>		
GRASSES	HERBS	SEDGES	over 0.5m	under 0.5m	
LIFE FORM	Very open Herbs 			Very open low sedge 1m 	
COVER CLASS (%)	2-10	2		2-10	
DOMINANT SPECIES	<i>Hyaloperma</i> <i>Siloxenus hum.</i>	<i>Leptocarpus roycellii</i>		<i>Lycopodium barb.</i>	

4. VEGETATION CONDITION

1	'PRISTINE'	COMMENTS
2	EXCELLENT ✓	
3	VERY GOOD	
4	GOOD	
5	DEGRADED	

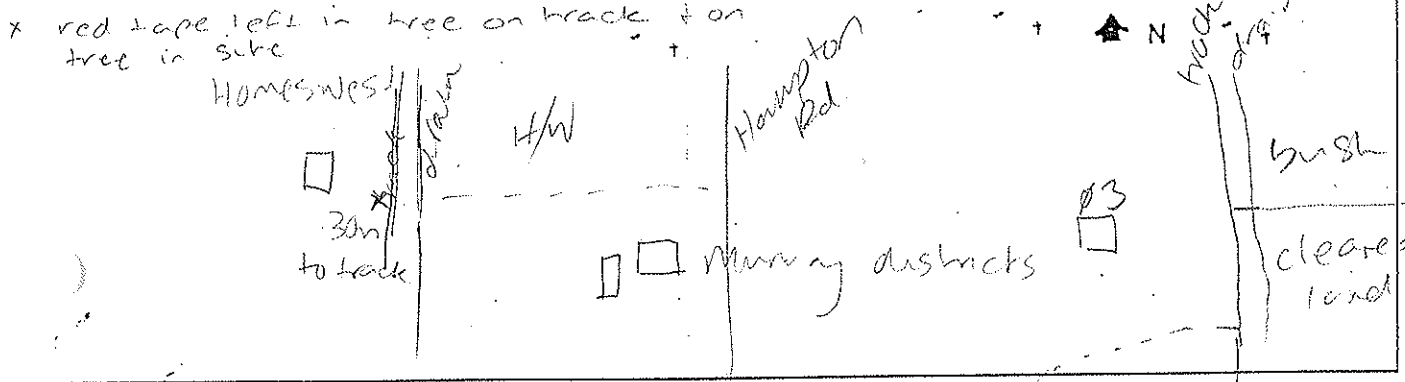
BUSHLAND PLANT SURVEY RECORDING SHEET 1- use pencil only

USHLAND AREA HAMPTON RD PINJARRA SITE NUMBER (PINZ 03) HAMP 03
 DATE TRIP 17-11-95 RECORDERS BJK NLT JS
 DATE TRIP _____ RECORDERS _____
 DATE TRIP _____ RECORDERS _____
 BOTANIST _____

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 4 Nedlands WA 6008.

LOCATION of the QUADRAT

Field Map Draw a sketch of the location of the site below.



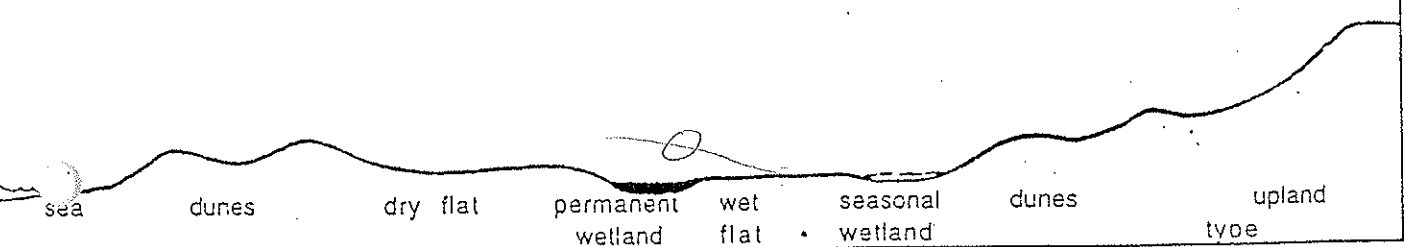
Road Location _____

Geographic Location Latitude 32° 38' 18" S Longitude 115° 51' 41" E Altitude _____

Reference Map EPE 127 nit

Photograph _____ Photocracher's Name _____ TS Photo No 25

Topographic position Circle position of site on the transect (alter the transect if necessary)



2. SITE DATA Circle the correct response.

Slope flat gentle steep Aspect N NE E SE S SW W NW

Surface Soil sand Colour brown
 Exposed rock _____ type _____ % surface _____

Sub-surface Soil sand Colour cream
 Rock _____ type _____ depth to rock _____

Drainage well mod poor depth water _____ cm Wet all year winter/spring

Litter 30-70 % cover _____ Bare Ground zero % cover _____
 Depth up to 15 cm











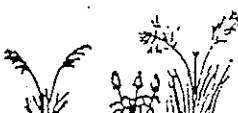



BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

From 'Bushland Plant Survey' written by B. Keighery (2004) and published by the Wildflower Society of W.A. Inc., PO Box 64 Nedlands W.A. 6008.

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below), and dominant species in each layer.

Cover Class 2-10% 10-30% 30 - 70% over 70%

LIFE FORM	TREES			MALLEES	
	over 30m	15 - 30m	5 - 15m under 5m	over 9m	under 9m
			 Low forest A		
COVER CLASS (%)			30-70		
DOMINANT SPECIES			Banksia aff Allocasuarina		
LIFE FORM	SHRUBS			SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
	Scrub 				Dwarf scrub 
COVER CLASS (%)	10-30 KIND				10-30
DOMINANT SPECIES	melaleuca thym. Kurzea enc.				Bossiaea erio Tetratheca hirsuta
LIFE FORM	GRASSES	HERBS	SEDGES	SEDGES	
			over 0.5m	under 0.5m	
		Dense herbs 		open low sedges 	
COVER CLASS (%)		70+		10-30	
DOMINANT SPECIES		Conostylis aculeata Phlebotaraxia		Lox flex	

4. VEGETATION CONDITION

1	'PRISTINE'	COMMENTS dead Banksias ? drawdown Jarrah cut out
2	EXCELLENT	
3	VERY GOOD ✓	
4	GOOD	
5	DEGRADED	

11/11/95

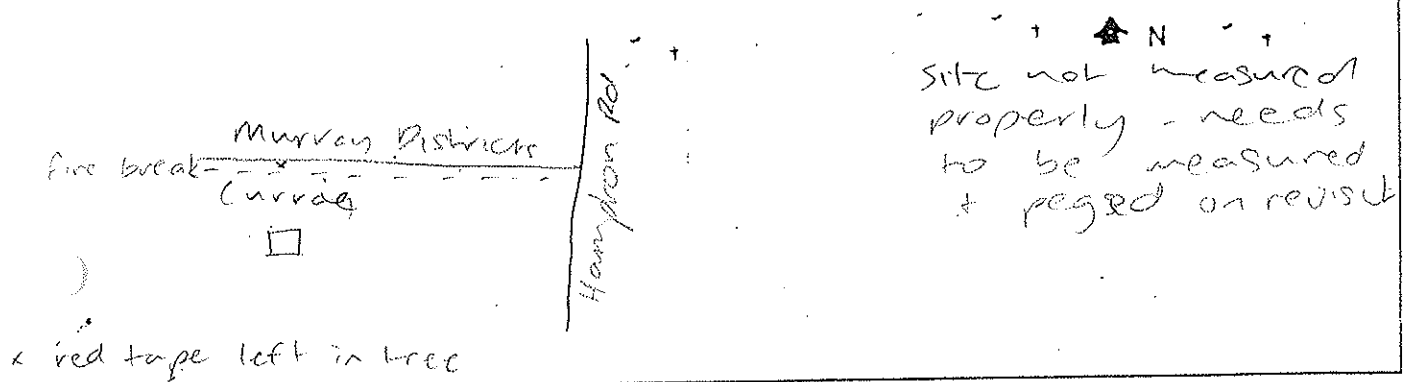
BUSHLAND PLANT SURVEY RECORDING SHEET 1- use pencil only

BUSHLAND AREA HAMPTON RD LOT 350 SITE NUMBER PL 2 04
 DATE TRIP 17-11-95 RECORDERS BTK NCT TS
 DATE TRIP _____ RECORDERS _____
 DATE TRIP _____ RECORDERS _____
 BOTANIST _____

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 24 Nedlands WA 6008.

LOCATION of the QUADRAT

Map Draw a sketch of the location of the site below.



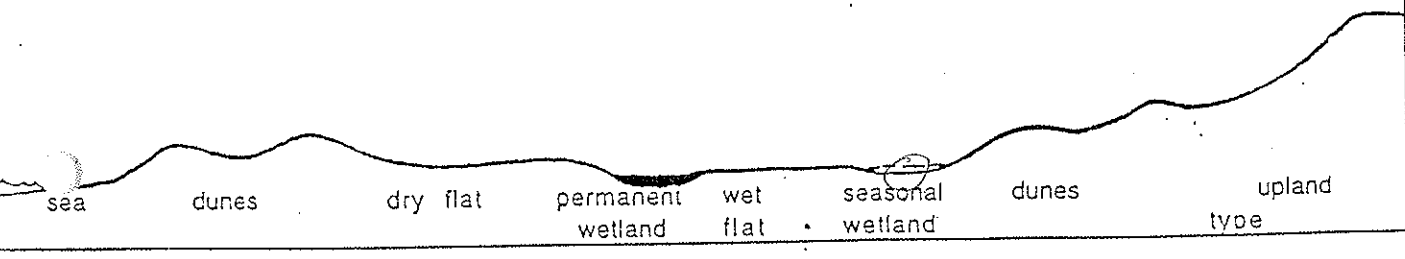
Road Location Hampton Rd

Geographic Location Latitude 32° 38.176 S Longitude 115° 51.756 E Altitude

Reference Map EPE ± 39 mt

Photograph Photographer's Name TJ Photo No 26

Topographic position Circle position of site on the transect (alter the transect if necessary)



2. SITE DATA Circle the correct response.

Slope (flat) gentle steep Aspect N NE E SE S SW W NW

Surface Soil type clay Colour % surface

Sub-surface Soil type depth to rock Colour

Drainage well mod (poor) depth water cm Wet all year (winter/spring)

Litter	<u>30-70</u>	% cover	Bare Ground	<u>< 2</u>	% cover
Depth	<u>2 leaf</u>	cm			



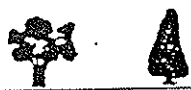


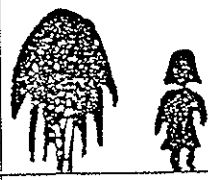







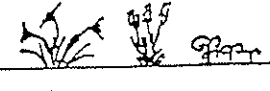
BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of W.A. Inc., PO Box 64 Nedlands WA 6008.

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below), and dominant species in each layer.

Cover Class 2-10% 10-30% 30 - 70% over 70%

		TREES			MALLEES	
		over 30m	15 - 30m	5 - 15m under 5m	over 8m	under 9m
LIFE FORM						
COVER CLASS (%)						
DOMINANT SPECIES						
		SHRUBS			SHRUBS	
		over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM		Scrub 		Heath B 		
COVER CLASS (%)		10 - 30		30 - 70		
DOMINANT SPECIES		Hakia varia		Pencalanma ellip.		
		GRASSES	HERBS	SEDGES	SEDGES	
			Very open herbs	over 0.5m Dense tall Sedges	under 0.5m	
LIFE FORM						
COVER CLASS (%)			2 - 10	70 +		
DOMINANT SPECIES			Stylidium elon Gratiola ped	Leptocarpus roycei		

4. VEGETATION CONDITION

1	'PRISTINE'		COMMENTS trampled by cattle odd weed.
2	EXCELLENT	✓	
3	VERY GOOD		
4	GOOD		
5	DEGRADED		

HAMP 01

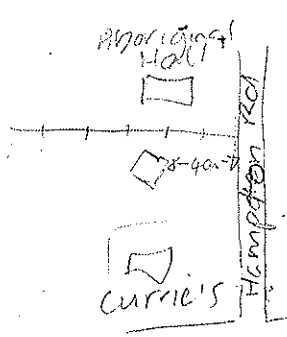
BUSHLAND PLANT SURVEY RECORDING SHEET 1- use pencil only

BUSHLAND AREA PINJARRA 2 SITE NUMBER PINE 01
 DATE TRIP 17/11/95 RECORDERS BJK, NCT, TS
 DATE TRIP _____ RECORDERS _____
 DATE TRIP _____ RECORDERS _____
 BOTANIST _____

From 'Bushtland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 2 Nedlands WA 6008.

LOCATION of the QUADRAT

Study Map Draw a sketch of the location of the site below.



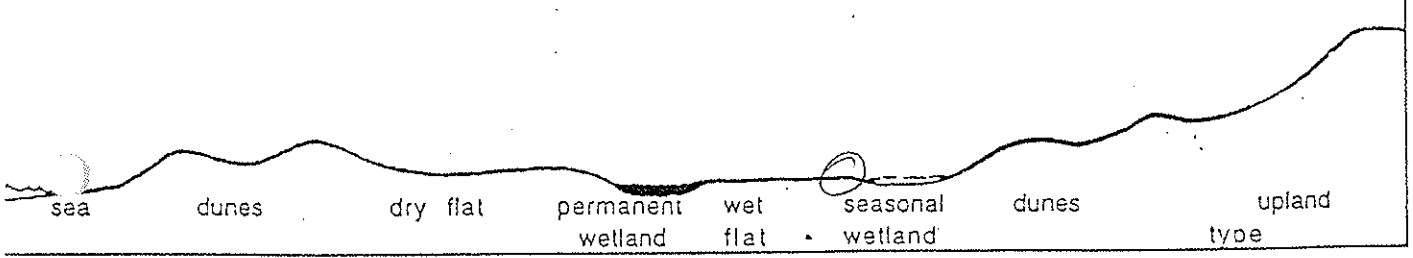
replaced fence droppers with survey pegs marked with red tape

Road Location

Geographic Location Latitude 32° 38' 23.1 S Longitude 115° 51' 79.4 E Altitude
 Reference Map EPE ± 60m

Photograph Photographer's Name TS Photo No 23

Topographic position Circle position of site on the transect (alter the transect if necessary)



2. SITE DATA Circle the correct response.

Slope flat gentle steep Aspect N NE E SE S SW W NW

Surface Soil peaty sand Colour dark brown
 Exposed rock type % surface

Sub-surface Soil Colour
 Rock type depth to rock

Drainage well mod poor depth water cm Wet all year winter/spring

Litter 30-70 % cover Bare Ground zero % cover
 Depth up to 10 cm

HAMP 01

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No HAMP 01
 Date 17/11/95

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

From 'Busland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 64 Nedlands WA 6008.

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
✓ Euc. mang.				HERBS				✓ 40 Mono. bracteata			
✓ Euc. cataphylla				✓ Pat. occid.				✓ Burd. umbell (entered on SED)	✓	✓	✓
✓ Warty tree (suckers)				• Amp. eric = Monot. occid.	✓			✓ Lep. fimb.			
				• Chem. congn				✓ Stylid brom			
				• Quas. pitt.	✓			✓ Alb. ciliata			
				• Herb? Cono-junc	✓			✓ Lotus angust	✓		✓
MALLEES				✓ Actinotus glomeratus				✓ Lam. hexm.			
				✓ Lamandra praeisii				✓ Lam. sericea			
				GRASSES				✓ Stylid calc.			
				✓ Briz. max				✓ Loran. stipit			
				✓ Briz. min				✓ Ursina anthon			
SHRUBS				✓ Mira. cany.				✓ Trachy. pilosa			
✓ Jack ferroll.				✓ Amph. lacuroides				✓ Hom. Roma			
✓ Mal. tymoides (yel ball)				✓ Stipa com.				SEDGES			
✓ Anth. praeisii				✓ Danthonia sp.	✓			✓ Schoen. rod.			
✓ Hyp. angust								✓ Schoen. curv.			
✓ Hom. tom								✓ Hyp. ovulata			
✓ Acacia lasio: [large] = PINOSPARKA								✓ Meo. graciliceps	✓		✓
(VSP previous visit)				HERBS				✓ Centro. aristata (handwritten)			
✓ Lech. expansa	VSP			✓ Lob. tenuior				✓ Lapid. arcuat			
✓ Kun. excelsa				✓ Dasy. brom							
✓ Ast. aff. fascic				✓ Dist. humit.							
✓ Eulalia virgata				✓ Mitra. pascuosa				✓ Centropis inconspicua			✓
✓ Boss. erio.				✓ Dampiera lin				(Added by NR 2/5/96 to BK)			
✓ Pan. alip.				✓ Anth. hura							
✓ Pteroc. sten.				✓ Hyp. glabra							
✓ Ernst. spicatus				✓ Hyp. nig.							
				✓ Bobera gig. VSP GENIC	VSP			AOT			
				✓ Selaginella gracil.				Nastura			
				✓ Styrandria glauca				✓ Mel. praeisiana			
				✓ Hydrocotyle callicarpa	VSP						
				✓ Lamandra praeisii (VSP)							

congested
NR.

HAMP 02.

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No RH 5002A
 Date 17/11/95

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 64 Nedlands WA 6008.

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
✓ Mel. <i>prosseri</i>				✓ <i>Centrolepis mutica</i>				✓ <i>Dasy. brown</i>			
✓ Ac. <i>salig</i>								✓ <i>Phyllodactyla drum.</i>			
								✓ <i>Stylid. utric</i>			
				? <i>violacea</i> ←				✓ <i>Trib. sp (single flower, fruit)</i>			
								✓ <i>Stylid. guttatum</i>			
MALLEES								✓ <i>Phylod. drummond</i>			
				GRASSES				✓ <i>Halcy. Hal</i>			
				✓ <i>B. Briza Max</i>				✓ <i>Damp. lin</i>			
				✓ <i>B. Briza min</i>				✓ <i>Mono broct</i>			
SHRUBS								✓ <i>Hyp. glabra</i>			
✓ <i>Hakea sulcata</i> (kret)								✓ <i>Phrent. viscosa</i>			
✓ <i>Vert. densiflora</i>								✓ <i>Cassytha micrantha</i>			
✓ <i>Men. ellip.</i>								SEDGES			
✓ <i>Hakea Jara</i>								✓ <i>Stys. barb</i>			
✓ <i>Caloth (kret) lateralis</i>								✓ <i>Hyp. ensulca</i>			
✓ <i>Bracalia lasio</i> [large] = PINSARRA								✓ <i>Stylidia cya</i>			
✓ <i>Eutax. virgata</i>								✓ <i>Leptocarpos Grayceii</i> (VSP)			
				HERBS				✓ <i>Schoenus odontocarpus</i>			
				✓ <i>Cono. aculeata</i>				✓ <i>Juncus capitatus</i>			
				✓ <i>Anig. viridis</i> (sterile) W				✓ <i>Schoenus rod.</i>			
				✓ <i>Selaginella grac.</i>				✓ <i>Antel. cya</i>			
				✓ <i>Phlox. suabotensis</i>				✓ <i>Lepid. long</i>			
				✓ <i>Hyd. cot.</i> (clay tufted - B)				✓ <i>Centrolepis inconspicua</i> (VSP)			
				✓ <i>Cham. corym.</i>				✓ <i>Centrolepis aristata</i>			
				✓ <i>Stylid. minuticum</i> (VSP)				ADJ			
				✓ <i>Silax. humit</i>				✓ <i>Brachy. pelid</i>			
				✓ <i>Mitrasene peradone</i>				✓ <i>Droop. occid</i>			
				✓ <i>Drosera sp</i> (SSP genic)				✓ <i>Mel. rhomb</i>			
				✓ <i>Hydrocotyle callitriche</i>				✓ <i>Lepta. arist</i>			
				✓ <i>Thelymitra antenifera</i>				In the community			
								✓ <i>Watsonia</i> on edge to south along firebreak.			

HAMP 03

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No RINE 03
 Date 17/11/95

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

From 'Bushland Plant Survey' written by B. Keighery (1994) and published by the Wildflower Society of WA (Inc.), PO Box 64 Nedlands WA 6008.

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
✓ Bank aff.								✓ <i>Burchardia olea</i>			
✓ Bank illic (large trees dead)								✓ <i>Strophanthus pilosus</i>			
✓ <i>Euc. marg.</i>								✓ <i>Strophanthus nemorosus</i>			
✓ <i>Allocas. tricus.</i>								✓ <i>Urs. antler</i>			
								✓ <i>Stag. hueg.</i>			
								✓ <i>Cham. corym.</i>			
								✓ <i>Thys. mat. flor.</i>			
MALLEES											
				GRASSES							
				✓ <i>Briza max.</i>							
				✓ <i>Ara. com.</i>							
SHRUBS				✓ <i>Dactyloctenium aegyptium</i>	SP						
✓ <i>Kunzea erici</i>								SEDGES			
✓ <i>Bos. eria</i>								✓ <i>Lepid. angust.</i>			
✓ <i>Mel. thymoides</i>								✓ <i>Lox. flex.</i>			
✓ <i>Petrophile linearis</i>								✓ <i>Thys. barb.</i>			
✓ <i>Tetra. hirs. scp (glabrous)</i>											
✓ <i>Hovea tri. var. tri.</i>											
✓ <i>Clomph. tom.</i>				HERBS							
✓ <i>Bauhinia physodes</i>				✓ <i>Phleb. ciliata</i>							
✓ <i>Cono. dend.</i>				✓ <i>Stylid. pilif.</i>							
✓ <i>Stylid. verm.</i>				✓ <i>Stylid. tenuis</i>							
✓ <i>Hibb. var.</i>				✓ <i>Conostylis acut.</i>							
✓ <i>Hibb. racem.</i>				✓ <i>Stylid. brun.</i>							
✓ <i>Cono. dressii</i>				✓ <i>Burch. cong.</i>							
✓ <i>Eucalypt. linearis</i>	✓			✓ <i>Hyp. glob.</i>							
✓ <i>Hibb. acerosa</i>	✓			✓ <i>Cono. aculeata</i>							
✓ <i>Amp. eric. = Montax. aced.</i>	✓			✓ <i>Damp. tin.</i>							
✓ <i>Erigeron spic. = sv.</i>				✓ <i>Homb. home.</i>							
✓ <i>Acacia hueg.</i>				✓ <i>Dasy. brom.</i>							
✓ <i>Yant. dressii</i>				✓ <i>Cono. juncea</i>							
				✓ <i>Thys. arbuscular</i>							

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: HAMPTON ROAD PINTARRA.

b) Nearest Corner: GREENSLAND RD. & DIXON STREET

c) Lot Number: 350 Street Number:

d) Town/Suburb/Location: PINTARRA

e) Local Council: MURRAY SHIRE COUNCIL

f) Site Name (if any):

g) Approximate size of the area (ha): 40 ha

h) Please locate the area on a map and give us map references if possible:

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

j) Map no.: PLEASE SEE

k) Grid Ref: MAP AT BACK OF FORM.

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

CONTACT MURRAY DISTRICT ABORIGINAL ASS. 09 5312222

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

(YES) FIRE BREAK THROUGH SWAMP LAND;
COW, SHEEP, HORSES & GOATS IN ON Paddock.

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) LAND OWNED IN MURRAY SHIRE COUNCIL

DEWA HOLD TRUST DEED'S BEN BURY

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) MURRAY DISTRICT ORIGINAL ASS. 095312513

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

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)

THIS WAS ALWAYS THERE FOR FOOD, FLORA + FAUNA

WE HAVE ~~BANDICOOTS~~ MOUSE + KANGAROO BANDICOOT KANGAROOS TO

6. What is/are the soil type/s and colours? SAND + NATURAL BUSH

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 LAND IS THE LAST BIT OF BUSH

SEE MAP SUPPLIED IN PINJARRA AREA A (THIS MAP IS 4 YRS OLD)

THERE AS BEEN CHANGES, SUCH AS CLEARING OF LAND

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

SWAMP

If yes, what kind of a wetlands is it?

a) lake

b) river

c) stream

d) swamp

e) estuary

f) seasonally wet

g) other

- 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? FOOD & MEDICAL PLANTS,
ALTHOUGH BUSHLAND

16. Do you know of any native animals that use the area? YES

Can you list those you know of? (birds, mammals, reptiles, amphibians etc)
BANDICOOTS, MOUSE & KANGAROO SPECIES

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

If yes, please name them and indicate source of information
SURVEY DONE 4 YEARS BY CALM & BOB COOPER

CAN YOU TELL US A LITTLE ABOUT THE SURROUNDING AREA

18. Are there any bushland areas (including wetlands) near to this area?
YES THE WHOLE WAY

If yes, how close are they? ALL AROUND

Are they already conservation reserves? NO

What is their approximate size? (100 HA)

19. Does the submitted area link other bushland areas? YES
AREA RUNNING OF M.D.A.A. BUSHLAND

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

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.

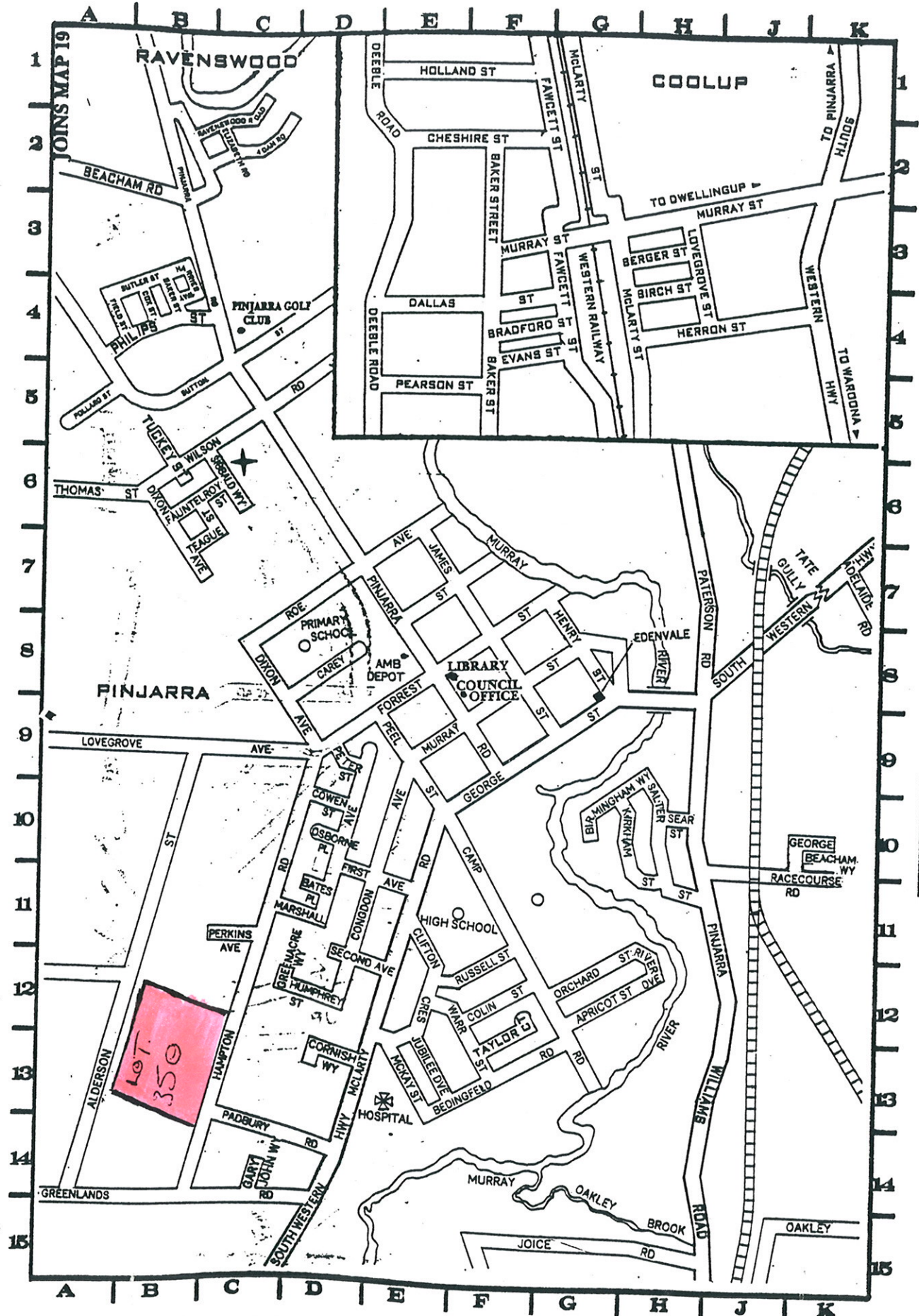
6 = Completely Degraded

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

The LOCALINK



70/11/95

REPORT ON BIRD SPECIES SEEN AT PINJARRA

On 17 November, 1995, Margery Clegg and Bryan Barrett of the WA branch of the Royal Australasian Ornithologists Union, walked in three areas of bush to the north and west of Pinjarra. During the day 33 species were noted, of which the most common species were Western Gerygone, Inland Thornbill and Brown Honeyeater. While we were there few birds called, consequently we think other species may have been present in the dense undergrowth but were not calling.

Walking around Block 1 we felt sure that White-browed Scrubwrens should be present and possibly Scarlet Robins. Some species were common to all three areas. The Aboriginal land and Block 1 were adjacent to each other, being only separated by an open ditch. Birds were seen flying from one to the other and we believe the two should be treated as one from an ornithological point of view.

It should be noted that the summer migrants will be absent for the period of the cold weather, i.e. Shining Bronze Cuckoo, Sacred Kingfisher and Rainbow Bee-eater. Most of the other species noted are more or less sedentary and having taken territory will remain there as long as there is a food supply.

The list of species seen and the areas in which they occurred were:
A = Aboriginal land, B1 = Block 1, P1 = Pinjarra 1.

Australian Kestrel	A, B1	Grey Fantail	A, B1, P1
Laughing Turtle-Dove	B1	Willie Wagtail	B1, P1
Crested Pigeon	B1	Splendid Fairy-wren	B1
Galah	B1	Western Gerygone	B1, A, P1
Red-capped Parrot	A, P1	Inland Thornbill	B1, A
Port Lincoln Parrot	A, P1	Western Thornbill	B1
Shining Bronze Cuckoo	A	Yellow-rumped Thornbill	P1
Laughing Kookaburra	P1	Red Wattlebird	B1, A, P1
Sacred Kingfisher	B1, A, P1	Brown Honeyeater	B1, A, P1
Rainbow Bee-eater	B1, A, P1	Western Spinebill	A
Tree Martin	B1	Striated Pardalote	B1, A
Black-faced Cuckoo shrike	B1, A, P1	Magpie-lark	P1
Rufous Whistler	B1, A, P1	Grey Butcherbird	A
Grey Shrike-thrush	P1	Australian Magpie	B1, A, P1
		Australian Raven	B1, A, P1

In addition, the following few species were noted either flying over or very close to one or other of the areas:

Little Pied Cormorant

White-faced Heron

Pacific Black Duck

Australian Hobby

White-faced Heron footprints were noted in damp mud on P1.

88 Tudor Ave South
RIVERTON 6148



*Electronic version
letter to Homeswest
8/12/1995*

Graeme Jones
Regional Manager
Homeswest
99 Plain Street
EAST PERTH WA 6004

Your Ref
Our Ref 67/91
Enquiries N Thorning

Dear Mr Jones

SYSTEM SIX UPDATE PROGRAMME - FLORA SURVEY INFORMATION

Thank you for providing permission for our botanical team to survey the bushland on your property. As arranged between yourself and Mrs Bronwen Keighery of this Department (arrangement of blanket approval), the bushland on Lots 295 Alderson St and Lot 296 Hampton Rd, Pinjarra was visited on 17 November 1995.

The botanical survey provides us with information on the natural plant communities found in the area, and their condition. This information is needed to assist the Department of Environmental Protection in its programme to update the conservation recommendations for System 6 and the coastal plain portion of System 1. The main objective of the programme is to ensure that the proposed conservation estate is representative of the ecological communities extant in the region.

As part of this programme the Department has advertised for the public to submit areas of bushland that they consider to be of regional significance. Our botanical team is surveying these submitted areas as well as those it considers may be important based on other factors such as their location and soil type etc. The botanical survey provides us with information on the natural plant communities found in the area, and their condition. Please note that the area is one of many sites that we have surveyed. The fact that we visited and surveyed the site does not indicate that it will necessarily be included in the updated System Six Recommendations.

The update programme has employed the botanical survey methodology used in Gibson et al. (1994), 'A Floristic Survey of the Southern Swan Coastal Plain', to provide the main information base upon which to review the adequacy of the existing System recommendations and to assess other bushland areas.

Two survey sites were located on the property, one on each Lot, and metal fence droppers were left in each corner of the 10 metres by 10 metres square survey sites. We

may wish to revisit these sites at a later date. A general description of the vegetation and an assessment of its condition was also completed.

The information collected during the visits will be used to assess the relative conservation values of the bushland areas. The final selections for inclusion in the updated System Six Recommendations will be the best possible examples of bushland containing plant community types that are either unrepresented or poorly represented in the current and proposed conservation system.

If you are interested in the information we have collected, the location of the survey sites or any other additional information on the System Six Update Programme please don't hesitate to contact Miss Natalie Thorning (222 7051) or Mr Kevin McAlpine (222 7055).

Once again, thank you very much for your support for this programme.

Yours sincerely

Colin Sanders
DIRECTOR
POLICY AND STRATEGIC STUDIES

8 December 1995

rptHamp01-04plots

PLOT	hamp01
FLORISTIC	4
DATE01	17/11/1995
BOTAN01	BJK
DATE02	12:00:00 AM
BOTAN02	na
DATE03	12:00:00 AM
BOTAN03	na
TOPO_POS	12
TOPO_QUAL	s
TOPO_NEW	na
SLOPE	1 = flat
ASPECT	0
SOILSURFA	dk brown peaty sand
SOILSUBSU	na
DRAINAGE	1 = well drained
WET	0 = na
DOM1 Sp 1 TAXO	
DOM1 Sp 1 CODE	Eucalyptus calophylla
DOM1 Sp 2 TAXO	
DOM1 Sp 2 CODE	
DOM1 Sp 3 TAXO	
DOM1 Sp 3 CODE	
DOM1 Sp 4 TAXO	
DOM1 Sp 4 CODE	
VEGE1	na
DOM2 Sp 1 TAXO	

} Wetland - seasonal basin

DOM2 Sp 1 CODE Hypocalymma angustifolium
 DOM2 Sp 2 TAXO
 DOM2 Sp 2 CODE Xanthorrhoea preissii
 DOM2 Sp 3 TAXO
 DOM2 Sp 3 CODE
 DOM2 Sp 4 TAXO
 DOM2 Sp 4 CODE
 VEGE2 na
 DOM3 Sp 1 TAXO
 DOM3 Sp 1 CODE Phlebocarya ciliat
 DOM3 Sp 2 TAXO
 DOM3 Sp 2 CODE Dasypogon bromeliifolius
 DOM3 Sp 3 TAXO
 DOM3 Sp 3 CODE Lobelia tenuior
 DOM3 Sp 4 TAXO
 DOM3 Sp 4 CODE
 VEGE3 na
 DOM4 Sp 1 CODE Schoenus rodwayanus
 DOM4 Sp 2 TAXO
 DOM4 Sp 2 CODE Hypolaena exsulca
 DOM4 Sp 3 TAXO
 DOM4 Sp 3 CODE
 DOM4 Sp 4 TAXO
 DOM4 Sp 4 CODE
 VEGE4 na
 VEGECOND 3 = Kei Very Good (Keighary 1994)
 WETLANDSU P.1 (see table in BF Vol 2)
 WETLANDTY_NE p palusplain
 ENVIROGEO COD Qpb (see table in BF Vol 2)

PLOT	hamp02
FLORISTIC	5
DATE01	17/11/1995
BOTAN01	BJK
DATE02	12:00:00 AM
BOTAN02	na
DATE03	12:00:00 AM
BOTAN03	na
TOPO_POS	5
TOPO_QUAL	na
TOPO_NEW	na
SLOPE	1 = flat
ASPECT	0
SOILSURFA	sandy clay
SOILSUBSU	na
DRAINAGE	3 = poor
WET	2 = winter/spring
DOM1 Sp 1 TAXO	
DOM1 Sp 1 CODE	Hakea sulcata
DOM1 Sp 2 TAXO	
DOM1 Sp 2 CODE	
DOM1 Sp 3 TAXO	
DOM1 Sp 3 CODE	
DOM1 Sp 4 TAXO	
DOM1 Sp 4 CODE	
VEGE1	na
DOM2 Sp 1 TAXO	
DOM2 Sp 1 CODE	Pericalymma ellipticum
DOM2 Sp 2 TAXO	

} Wetland - permanent? basah
(may be seasonal
basah!)

DOM2 Sp 2 CODE Verticordia densiflora
 DOM2 Sp 3 TAXO
 DOM2 Sp 3 CODE
 DOM2 Sp 4 TAXO
 DOM2 Sp 4 CODE
 VEGE2 na
 DOM3 Sp 1 TAXO
 DOM3 Sp 1 CODE Hyalospørna cotula
 DOM3 Sp 2 TAXO
 DOM3 Sp 2 CODE Siloxerus humifusus
 DOM3 Sp 3 TAXO
 DOM3 Sp 3 CODE
 DOM3 Sp 4 TAXO
 DOM3 Sp 4 CODE
 VEGE3 na
 DOM4 Sp 1 CODE Lyginia barbata
 DOM4 Sp 2 TAXO
 DOM4 Sp 2 CODE
 DOM4 Sp 3 TAXO
 DOM4 Sp 3 CODE
 DOM4 Sp 4 TAXO
 DOM4 Sp 4 CODE
 VEGE4 na
 VEGECOND 2 - Excellent
 WETLANDSU P.1
 WETLANDTY_NE d dampland
 ENVIROGEO COD Qpb/Qpa

PLOT	hamp03
FLORISTIC	21a
DATE01	17/11/1995
BOTAN01	BJK
DATE02	12:00:00 AM
BOTAN02	na
DATE03	12:00:00 AM
BOTAN03	na
TOPO_POS	8
TOPO_QUAL	i
TOPO_NEW	na
SLOPE	1 = flat
ASPECT	0
SOILSURFA	brown sand
SOILSUBSU	cream sand
DRAINAGE	1 = well drained
WET	0 = na
DOM1 Sp 1 TAXO	
DOM1 Sp 1 CODE	Banksia attenuata
DOM1 Sp 2 TAXO	
DOM1 Sp 2 CODE	Casuarina fraseriana
DOM1 Sp 3 TAXO	
DOM1 Sp 3 CODE	
DOM1 Sp 4 TAXO	
DOM1 Sp 4 CODE	
VEGE1	na
DOM2 Sp 1 TAXO	
DOM2 Sp 1 CODE	Melaleuca thymoides
DOM2 Sp 2 TAXO	

} Upland - inland Sand Dune Slope

DOM2 Sp 2 CODE Kunzea ericifolia
 DOM2 Sp 3 TAXO
 DOM2 Sp 3 CODE
 DOM2 Sp 4 TAXO
 DOM2 Sp 4 CODE
 VEGE2 na
 DOM3 Sp 1 TAXO
 DOM3 Sp 1 CODE Bossiaea eriocarpa
 DOM3 Sp 2 TAXO
 DOM3 Sp 2 CODE Tetratheca hirsutus
 DOM3 Sp 3 TAXO
 DOM3 Sp 3 CODE
 DOM3 Sp 4 TAXO
 DOM3 Sp 4 CODE
 VEGE3 na
 DOM4 Sp 1 CODE Conostylis aculeata
 DOM4 Sp 2 TAXO
 DOM4 Sp 2 CODE Phlebocarya
 DOM4 Sp 3 TAXO
 DOM4 Sp 3 CODE
 DOM4 Sp 4 TAXO
 DOM4 Sp 4 CODE
 VEGE4 na
 VEGECOND 3 = Very Good
 WETLANDSU P.1
 WETLANDTY_NE P palus plain
 ENVIROGEO COD Qpb

PLOT	hamp04
FLORISTIC	12
DATE01	17/11/1995
BOTAN01	BJK
DATE02	12:00:00 AM
BOTAN02	na
DATE03	12:00:00 AM
BOTAN03	na
TOPO_POS	5
TOPO_QUAL	na
TOPO_NEW	na
SLOPE	1 = flat
ASPECT	0
SOILSURFA	clay
SOILSUBSU	clay
DRAINAGE	3 = poor
WET	2 = winter / spring
DOM1 Sp 1 TAXO	
DOM1 Sp 1 CODE	Hakea varia
DOM1 Sp 2 TAXO	
DOM1 Sp 2 CODE	
DOM1 Sp 3 TAXO	
DOM1 Sp 3 CODE	
DOM1 Sp 4 TAXO	
DOM1 Sp 4 CODE	
VEGE1	na
DOM2 Sp 1 TAXO	
DOM2 Sp 1 CODE	Pericalymma ellipticum
DOM2 Sp 2 TAXO	

} Wetland - permanent ? basin
(may be seasonal basin !)

DOM2 Sp 2 CODE
 DOM2 Sp 3 TAXO
 DOM2 Sp 3 CODE
 DOM2 Sp 4 TAXO
 DOM2 Sp 4 CODE
 VEGE2
 DOM3 Sp 1 TAXO
 DOM3 Sp 1 CODE
 DOM3 Sp 2 TAXO
 DOM3 Sp 2 CODE
 DOM3 Sp 3 TAXO
 DOM3 Sp 3 CODE
 DOM3 Sp 4 TAXO
 DOM3 Sp 4 CODE
 VEGE3
 DOM4 Sp 1 CODE
 DOM4 Sp 2 TAXO
 DOM4 Sp 2 CODE
 DOM4 Sp 3 TAXO
 DOM4 Sp 3 CODE
 DOM4 Sp 4 TAXO
 DOM4 Sp 4 CODE
 VEGE4
 VEGECOND = Excellent
 WETLANDSU
 WETLANDTY_NE
 ENVIROGEO COD

GENUS	SPECIES	Hamp01	Hamp02	Hamp03	Hamp04
Acacia	huegelii			1	
	lasiocarpa (Pinjarra form) (BJ Keighery 2230)	1	1		
	saligna		1		
	stenoptera	1			
Actinotus	glomeratus	1			
Aira	caryophyllea	1		1	
Allocasuarina	fraseriana			1	
Amphibromus	nervosus				2
Amphipogon	laguroides	1			
Anigozanthos	viridis		1		
Aphelia	cyperoides		1		
Aponogeton	hexatepalus				1
Astartea	aff. fascicularis (Gibson et al. 1994)	1			1
	affinis				1
Austrodanthonia	occidentalis	1		1	
Austrostipa	compressa	1			
Banksia	attenuata			1	
	ilicifolia			1	
Bossiaea	eriocarpa	1		1	
Brachyscome	bellidioides		1		
Briza	maxima	1	1	1	1
	minor	1	1		1
Burchardia	congesta	1		1	
Calothamnus	lateralis		1		
Cassytha	micrantha		1		
	racemosa				1
Centrolepis	aristata	1	1		1
	inconspicua	1	1		
	mutica		1		2
Chaetanthus	aristatus		1		
Chamaescilla	corymbosa	1	1	1	
Cicendia	filiformis				1
Conostephium	pendulum			1	
	preissii			1	
Conostylis	aculeata		1	1	1
	juncea			1	
Cyathochaeta	avenacea				2
Dampiera	linearis	1	1	1	
Dasyogon	bromeliifolius	1	1	1	
Daviesia	physodes			1	
Desmocladius	flexuosus			1	
Disa	bracteata	1	1		
Drosera	gigantea	1	1		
	nitidula				1
	occidentalis		1		
Eucalyptus	calophylla	1			
	marginata	1		1	
Euchilopsis	linearis			1	
Eutaxia	virgata	1	1		
Gompholobium	tomentosum	1		1	
Gonocarpus	pithyoides	1			
Gratiola	pubescens				1
Hakea	sulcata		1		
	varia		1		1
Hemiandra	pungens				1
Hibbertia	acerosa			1	
	racemosa			1	

GENUS	SPECIES	Hamp01	Hamp02	Hamp03	Hamp04
	stellaris			1	
	vaginata			1	
Homalosciadium	homalocarpum	1		1	
Hovea	trisperma			1	
Hyalosperma	cotula		1		
Hydrocotyle	callicarpa	1	1		
Hypocalymma	angustifolium	1			
Hypochaeris	glabra	1	1	1	1
Hypolaena	exsulca	1	1		
Isolepis	cemua				1
	oldfieldiana				1
Jacksonia	furcellata	1			
Juncus	capitatus		1		
Kunzea	glabrescens	1		1	
Lachnagrostis	filiformis				1
Lagenophora	huegelii			1	
Lechenaultia	expansa	1			
Lepidosperma	longitudinale		1		1
	squamatum	1		1	
Leporella	fimbriata	1			
Levenhookia	stipitata	1			
Lobelia	tenuior	1		1	
Lomandra	hermaphrodita	1		1	
	preissii	1			
	sericea	1			
	suaveolens		1		
Lotus	angustissimus	1			1
Lyginia	barbata		1	1	
Meeboldina	roycei		2		2
Melaleuca	incana				1
	lateritia				1
	preissiana	1	1		
	rhapsiophylla		1		1
	thymoides	1		1	
Mesomelaena	graciliceps	2			
Microtis	media				1
	orbicularis				1
Monotaxis	occidentalis	1		1	
Myriophyllum	echinatum				2
Nuytsia	floribunda	1			
Parentucellia	viscosa		1		
Patersonia	occidentalis	1			
Pericalymma	ellipticum	1	1		1
Petrophile	linearis			1	
Philothea	spicata	1			
Philydrella	drummondii		1		
Phlebocarya	ciliata	1		1	
Phyllangium	paradoxum	1	1		
Phylloglossum	drummondii		1		
Podolepis	gracilis (Swamp form) (GJ Keighery 13126)				1
Prasophyllum	drummondii				1
Pterostylis	sp. Slender Snail Orchid (G.J. Keighery 14516)				1
Pyrorchis	nigricans	1			
Rhodanthe	pyrethrum				2
Schoenus	curvifolius	1			
	efoliatus	1	1		
	odontocarpus		1		2

GENUS	SPECIES	Hamp01	Hamp02	Hamp03	Hamp04
	varicellae				1
Scholtzia	involuta			1	
Selaginella	gracillima	1	1		
Siloxerus	humifusus	1	1		
Sonchus	oleraceus			1	
Stachystemon	vermicularis			1	
Stylidium	brunonianum	1		1	
	calcaratum	1			
	divaricatum				1
	guttatum		1		
	longitubum				2
	mimeticum		2		
	piliferum			1	
	utricularioides		1		1
Stypandra	glauca	1			
Tetratheca	hirsuta			1	
Thelymitra	antennifera		1		
	flexuosa		1		
Thysanotus	arbuscula			1	
	multiflorus			1	
Trachymene	pilosa	1		1	
Tribonanthes	violacea		1		1
Ursinia	anthemoides	1		1	
Verticordia	densiflora		1		
Xanthorrhoea	preissii	1		1	
Xanthosia	huegelii	1			



Mr & Mrs Currie
PO Box 242
PINJARRA WA 6208

Head Office:
8th Floor, Westralia Square
141 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 7000 Fax (09) 322 1598

Waste Management Division:
Ground Floor, 32 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 0422 Fax (09) 222 0455
or PO Box Y3030, East, St Georges Terrace
Perth, Western Australia 6832

Regional Offices:
Bunbury • Karratha • Kalgoorlie • Kwinana

Your Ref
Our Ref
Enquiries

67/91
N Thorning

Dear Mr & Mrs Currie

SYSTEM SIX UPDATE PROGRAMME - FLORA SURVEY INFORMATION

Thank you for providing permission for our botanical team to survey the bushland on your property. As arranged between Mrs Currie and Miss Natalie Thorning of this Department, the bushland Lot 350 Hampton Rd, Pinjarra was visited on 17 November 1995.

The botanical survey provides us with information on the natural plant communities found in the area, and their condition. This information is needed to assist the Department of Environmental Protection in its programme to update the conservation recommendations for System 6 and the coastal plain of System 1. The main objective of the programme is to ensure that the proposed conservation estate is representative of the ecological communities extant in the region.

As part of this programme the Department has advertised for the public to submit areas of bushland that they consider to be of regional significance. Our botanical team is surveying these submitted areas as well as those it considers may be important based on other factors such as their location and soil type etc. The botanical survey provides us with information on the natural plant communities found in the area, and their condition. Please note that the area is one of many sites that we have surveyed. The fact that we visited and surveyed the site does not indicate that it will necessarily be included in the updated System Six Recommendations.

The update programme has employed the botanical survey methodology used in Gibson et al. (1994), 'A Floristic Survey of the Southern Swan Coastal Plain', to provide the main information base upon which to review the adequacy of the existing System recommendations and to assess other bushland areas.

Two survey sites were located on the property and wooden survey pegs were left in each corner of the 10 metres by 10 metres square survey sites. We may wish to revisit these sites at a later date, if so, we will contact you prior to our visit. A general description of the vegetation and an assessment of its condition was also completed.

The information collected during the visits will be used to assess the relative conservation values of the bushland areas. The final selections for inclusion in the updated System Six Recommendations will be the best possible examples of bushland containing plant community types that are either unrepresented or poorly represented in the current and proposed conservation system.

If you are interested in the information we have collected, the location of the survey sites or any other additional information on the System Six Update Programme please don't hesitate to contact Miss Natalie Thorning (222 7051) or Mr Kevin McAlpine (222 7055).

Once again, thank you very much for your support for this programme.

Yours sincerely

A handwritten signature in black ink, appearing to be 'MS', written in a cursive style.

Colin Sanders
DIRECTOR
POLICY AND STRATEGIC STUDIES

8 December 1995



Head Office:
8th Floor, Westralia Square
141 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 7000 Fax (09) 322 1598

Waste Management Division:
Ground Floor, 32 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 0422 Fax (09) 222 0455
or PO Box Y3030, East, St Georges Terrace
Perth, Western Australia 6832

Regional Offices:
Bunbury • Karratha • Kalgoorlie • Kwinana

Mr Theo Kearing
Murray Districts Aboriginal Association
Lot 299 Hampton Rd
PINJARRA WA 6208

Your Ref
Our Ref
Enquiries

67/91
N Thorning

Dear Theo

SYSTEM SIX UPDATE PROGRAMME - FLORA SURVEY INFORMATION

Thank you for providing permission for our botanical team to survey the bushland on your property. As arranged between yourself and Miss Natalie Thorning of this Department, the bushland at Lot 217 Alderson St, Pinjarra was visited on 31 August 1995 and 17 November 1995.

The botanical survey provides us with information on the natural plant communities found in the area, and their condition. This information is needed to assist the Department of Environmental Protection in its programme to update the conservation recommendations for System 6 and the coastal plain portion of System 1. The main objective of the programme is to ensure that the proposed conservation estate is representative of the ecological communities extant in the region.

As part of this programme the Department has advertised for the public to submit areas of bushland that they consider to be of regional significance. Our botanical team is surveying these submitted areas as well as those it considers may be important based on other factors such as their location and soil type etc. The botanical survey provides us with information on the natural plant communities found in the area, and their condition. Please note that the area is one of many sites that we have surveyed. The fact that we visited and surveyed the site does not indicate that it will necessarily be included in the updated System Six Recommendations.

The update programme has employed the botanical survey methodology used in Gibson et al. (1994), 'A Floristic Survey of the Southern Swan Coastal Plain', to provide the main information base upon which to review the adequacy of the existing System recommendations and to assess other bushland areas.

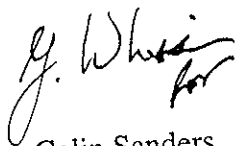
A general description of the vegetation and an assessment of its condition was completed, however, survey sites were not located on your property.

The information collected during the visits will be used to assess the relative conservation values of the bushland areas. The final selections for inclusion in the updated System Six Recommendations will be the best possible examples of bushland containing plant community types that are either unrepresented or poorly represented in the current and proposed conservation system.

If you are interested in the information we have collected, the location of the survey sites or any other additional information on the System Six Update Programme please don't hesitate to contact Miss Natalie Thorning (222 7051) or Mr Kevin McAlpine (222 7055).

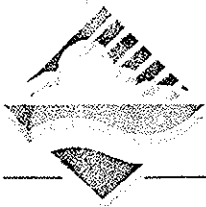
Once again, thank you very much for your support for this programme.

Yours sincerely



Colin Sanders
DIRECTOR
POLICY AND STRATEGIC STUDIES

21 December 1995



Head Office:
8th Floor, Westralia Square
141 St Georges Terrace
Perth, Western Australia 6000
Tel (09) 222 7000 Fax (09) 322 1598

Waste Management Division:
Ground Floor, 32 St Georges Terrace
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or PO Box Y3030, East, St Georges Terrace
Perth, Western Australia 6832

Regional Offices:
Bunbury • Karratha • Kalgoorlie • Kwinana

Mr David C Smith
Regional Manager
Department of Land Administration
'Bunbury Tower'
61 Victoria Street
BUNBURY WA 6230

Your Ref 1279/969
Our Ref 67/91
Enquiries N Thorning

ATTENTION: SHERALYN FORREST

Dear Mr Smith

SYSTEM 6 UPDATE PROGRAMME-FLORA SURVEY INFORMATION

As discussed between Ms Sheralyn Forrest and Miss Natalie Thorning, of this Department, I am writing to clarify comment made regarding the anticipated environmental value of Lot 350 Hampton Rd, Pinjarra, as requested in your letter dated 2 January 1996. I apologise for the delay in response to your request.

Firstly, Lot 350 Hampton Rd is situated on the eastern side of the Swan Coastal Plain which has been estimated to be 97% cleared of vegetation (CALM, 1990). The Wheatbelt considered to be 93% cleared (Beard, 1990) has been the subject of intensive study in the past 15 years but the eastern side of the Swan Coastal Plain has received comparably scant attention even though Beard noted in the same publication that there was "...no virgin vegetation left" on the eastern side of the Swan Coastal Plain. This situation has been recognized for some time and the two most recent regional studies of the Plain (Keighery and Trudgen 1992 and Gibson et al. 1994) both made direct recommendations concerning the the high conservation value of all remnants on the eastern side of the Plain, regardless of the size of the remnant.

Lot 350 varies from excellent to degraded condition. The southern side is suffering from most degradation where there is some pasture development. The grazing of cattle has had impact on the vegetation cover and has developed tracks through the seasonal wetland. Most of the wetland clay pan has no vegetation cover due to the trampling from the cattle but we expect that this could recover if grazing pressure was removed.

On the Department's visit to Lot 350 one species of Declared Rare Flora (*Aponogeton hexatepalus*) and three Priority species (*Styidium longitubum*, *Rhodanthe pyrethrum* and *Myriophyllum echinatum*) were collected. All of these species grow in the clay pan.

Data from the visit to Lot 350 is yet to be analysed to enable this site to be placed into a full regional context. However, from this available knowledge of the site it can be stated that the location has high conservation values and that these values are being damaged by the current grazing of the lease. We therefore recommend that grazing on this property cease. When more information becomes available it will be forwarded to you.

Yours sincerely

A handwritten signature in black ink, appearing to read 'R. Sippe', written in a cursive style.

R.A.D. Sippe
DIRECTOR
POLICY COORDINATION DIVISION

29 March 1996

**Department of Environmental Protection System 6 Update: Site Based Flora List for
Hampden Rd, Pinjarra (Subm no. 98)**
(Hamp01-04, B.J. Keighery, 13/6/96)

Anthericaceae

Chamaescilla corymbosa
Thysanotus arbuscula
Thysanotus multiflorus

Apiaceae

Actinotus glomeratus
Homalosciadium homalocarpum
Hydrocotyle callicarpa
Trachymene pilosa
Xanthosia huegelii

Aponogetonaceae

Aponogeton hexatepalus

Asteraceae

Brachyscome bellidioides
Hyalosperma cotula
* Hypochaeris glabra
Lagenifera huegelii
Podolepis gracilis swamp (GJK 13126)
Rhodanthe pyrethrum
Siloxerus humifusus
* Sonchus oleraceus
* Ursinia anthemoides

Casuarinaceae

Allocasuarina fraseriana

Centrolepidaceae

Aphelia cyperoides
Centrolepis aristata
Centrolepis inconspicua
Centrolepis mutica

Colchicaceae

Burchardia congesta

Cyperaceae

Cyathochaeta avenacea
Isolepis cernua

Isolepis oldfieldiana
Lepidosperma angustatum
Lepidosperma longitudinale
Mesomelaena graciliceps
Schoenus curvifolius
Schoenus odontocarpus
Schoenus rodwayanus

Dasypogonaceae

Dasypogon bromeliifolius
Lomandra hermaphrodita
Lomandra preissii
Lomandra sericea
Lomandra suaveolens

Dilleniaceae

Hibbertia acerosa
Hibbertia racemosa
Hibbertia vaginata

Droseraceae

Drosera gigantea subsp. geniculata
Drosera nitidula
Drosera occidentalis

Epacridaceae

Conostephium pendulum
Conostephium preissii

Euphorbiaceae

Monotaxis occidentalis
Stachystemon vermicularis

Gentianaceae

* Centaurium sp. scps
* Cicendia filiformis

Goodeniaceae

Dampiera linearis
Lechenaultia expansa

Haemodoraceae

Anigozanthos viridis
Conostylis aculeata
Conostylis juncea
Phlebocarya ciliata

Tribonanthes violacea

Haloragaceae

Gonocarpus pithyoides
Myriophyllum echinatum

Iridaceae

Patersonia occidentalis

Juncaceae

* *Juncus capitatus*

Lamiaceae

Hemiandra pungens

Lauraceae

Cassytha micrantha
Cassytha racemosa

Lobeliaceae

Lobelia tenuior

Loganiaceae

Mitrasacme paradoxa

Loranthaceae

Nuytsia floribunda

Lycopodiaceae

Phylloglossum drummondii

Mimosaceae

Acacia huegelii
Acacia lasiocarpa 'Pinjarra'
Acacia saligna
Acacia stenoptera

Myrtaceae

Astartea aff. *fascicularis* "Brixton" MET
Astartea aff. *fascicularis* sthct
Calothamnus lateralis
Eucalyptus calophylla
Eucalyptus marginata

Hypocalymma angustifolium
Kunzea ericifolia
Melaleuca incana
Melaleuca lateritia
Melaleuca preissiana
Melaleuca raphiophylla
Melaleuca thymoides
Pericalymma ellipticum
Scholtzia involucrata
Verticordia densiflora

Orchidaceae

Leporella fimbriata
Lyperanthus nigricans
Microtis media
Microtis orbicularis
* Monadenia bracteata
Prasophyllum drummondii
Pterostylis aff. nana scps
Thelymitra antennifera
Thelymitra flexuosa

Papilionaceae

Bossiaea eriocarpa
Daviesia physodes
Euchilopsis linearis
Eutaxia virgata
Gompholobium tomentosum
Hovea trisperma var. trisperma
Jacksonia furcellata
* Lotus angustissimus

Philydraceae

Philydrella drummondii

Phormiaceae

Stypandra glauca

Poaceae

Agrostis avenacea
* Aira caryophyllea
Amphibromus neesii
Amphipogon laguroides
* Briza maxima
* Briza minor
Danthonia occidentalis
Stipa compressa

Proteaceae

Banksia attenuata
Banksia ilicifolia
Hakea sulcata
Hakea varia
Petrophile linearis

Restionaceae

Hypolaena exsulca
Leptocarpus aristatus
Leptocarpus roycei MS
Loxocarya flexuosa
Lyginia barbata

Rutaceae

Eriostemon spicatus

Scrophulariaceae

Gratiola peruviana
* Parentucellia viscosa

Selaginellaceae

Selaginella gracillima

Stylidiaceae

Levenhookia stipitata
Stylidium brunonianum
Stylidium calcaratum
Stylidium divaricatum
Stylidium guttatum
Stylidium longitubum
Stylidium mimeticum
Stylidium piliferum
Stylidium utricularioides

Tremandraceae

Tetratheca hirsuta "glabrous" scps

Xanthorrhoeaceae

Xanthorrhoea preissii

75 total

9 weeds

66 Native

Site Based Flora List for Lot 350 Hampton Road, Pinjarra (Hamp01, 04, B.J. Keighery, 22/5/96)

1

Department of Environmental Protection System 6 Update: Site Based Flora List for
Lot 350 Hampton Road, Pinjarra (subm 98)
(Hamp01, 04, B.J. Keighery, 22/5/96)

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Chamaescilla corymbosa

Apiaceae

Actinotus glomeratus
Homalosciadium homalocarpum
Hydrocotyle callicarpa
Trachymene pilosa
Xanthosia huegelii

Asteraceae

Brachyscome bellidioides
Hyalosperma cotula
* *Hypochaeris glabra*
Siloxerus humifusus
* *Ursinia anthemoides*

Centrolepidaceae

Aphelia cyperoides
Centrolepis aristata
Centrolepis inconspicua
Centrolepis mutica

Colchicaceae

Burchardia congesta

Cyperaceae

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Lepidosperma longitudinale
Mesomelaena graciliceps
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Schoenus odontocarpus
Schoenus rodwayanus

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Dasypogon bromeliifolius
Lomandra hermaphrodita
Lomandra preissii
Lomandra sericea
Lomandra suaveolens

Droseraceae

Drosera gigantea subsp. *geniculata*
Drosera occidentalis

Euphorbiaceae

Monotaxis occidentalis

Goodeniaceae

Dampiera linearis
Lechenaultia expansa

Haemodoraceae

Anigozanthos viridis
Conostylis aculeata
Phlebocarya ciliata
Tribonanthes violacea

Haloragaceae

Gonocarpus pithyoides

Iridaceae

Patersonia occidentalis

Juncaceae

* *Juncus capitatus*

Lauraceae

Cassytha micrantha

Lobeliaceae

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Loganiaceae

Mitrasacme paradoxa

Loranthaceae

Nuytsia floribunda

Lycopodiaceae

Phylloglossum drummondii

Mimosaceae

Acacia lasiocarpa 'Pinjarra'
Acacia saligna
Acacia stenoptera

Myrtaceae

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Calothamnus lateralis
Eucalyptus calophylla
Eucalyptus marginata
Hypocalymma angustifolium
Kunzea ericifolia
Melaleuca preissiana
Melaleuca raphiophylla
Melaleuca thymoides
Pericalymma ellipticum
Verticordia densiflora

Orchidaceae

Burnettia nigricans MS
Leporella fimbriata
* Monadenia bracteata

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Thelymitra antennifera
Thelymitra flexuosa

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Selaginellaceae

Selaginella gracillima

Stylidiaceae

Levenhookia stipitata

Stylidium brunonianum

Stylidium calcaratum

Stylidium guttatum

Stylidium miniatum

Stylidium utricularioides

Xanthorrhoeaceae

Xanthorrhoea preissii



With Compliments

Natalie Fleming

As requested by phone 13.12.95

David Smith

BUNBURY REGIONAL OFFICE,
BUNBURY TOWER, 61 VICTORIA ST.
BUNBURY, W.A. 6230

FACSIMILE No: (097) 91 0835
TELEPHONE: (097) 91 0836

DEPARTMENT OF LAND ADMINISTRATION

Application E734415



ED UNDER THE LAND ACT, 1933

SPECIAL LEASE

(Under Section 117 of the *Land Act, 1933*.)

Lease No. **3116**
10697

SOUTH WEST DIVISION
Pinjarra Lot 350

C.L. No. 359/1991

Elizabeth the Second, by the Grace of God, Queen of Australia and Her other Realms and Territories, Head of the Commonwealth. To all to whom these presents shall come, GREETING: Know Ye that whereas by Section 117 of the *Land Act 1933*, power is given to the Minister for Lands to grant leases of any portion of crown land to any person for any purpose upon the terms and conditions set forth in that section: And whereas James Steel Borland Currie, of Lot 190 Hampton Road, Pinjarra

, in the said State, has made application for a lease of the land hereinafter described for the special purposes of

Grazing

And whereas the said Minister for Lands has approved the granting of the said lease; We of our especial Grace, and in consideration of the premises, and also in consideration of the rents hereinafter reserved and on the part of the said James Steel Borland Currie

his , Executors, Administrators, and Assigns (hereinafter called "the Lessee"), to be paid, and in exercise of the powers in that behalf to us given by the Act, do by these Presents demise and lease to the said Lessee the natural surface and so much of the land as is below the natural surface to a depth of 12.19 metres of ALL THAT piece or parcel of land being Pinjarra Lot 350

and containing 15.7604 hectares

as delineated by a border of green colour on the plan hereon, with the appurtenances: TO HAVE AND TO HOLD the premises hereby demised subject to the powers, reservations, and conditions herein and in the Act contained, and with all the rights, powers, and privileges conferred by such of the Act as are applicable hereto, unto the said Lessee, for the term of one year, to be computed from the First day of October, 1991, for the special purposes aforesaid: YIELDING AND PAYING therefor during the said term unto Us, Our Heirs and Successors, the yearly rent of \$250-00 without deduction, by equal payments half-yearly, in advance on or before 1 March and 1 September in every year, such rent to be paid to our Minister for Lands of Our said State: Provided, nevertheless, that it shall at all times be lawful for Us, our Heirs and Successors, or for any person or persons acting in that behalf by Our or Their authority, to resume and enter upon possession of any part of the said lands which it may at any time by Us, our Heirs and Successors, be deemed necessary to resume for roads, tramways, railways, railway stations, bridges, canals, towing paths, harbour or river improvement works, drainage or irrigation works, quarries, and generally for any other works or purposes of public use, utility, or convenience, and for the purpose of exercising the power to search for minerals and gems hereinafter reserved, and such land so resumed to hold to Us, our Heirs and Successors, as of Our or Their former estate, without making to the said Lessee, or any person claiming under him, any compensation in respect thereof; so, nevertheless, that the lands so to be resumed shall not exceed one-twentieth part in the whole of the lands aforesaid, and that no such resumption be made of any part of the said lands upon which any buildings may have been erected, or which may be enclosed and in use as gardens, or otherwise for the more convenient occupation of any such buildings or on which any other improvements as defined by the Act have been made without compensation: Provided also, that it shall be lawful at all times for Us, our Heirs and Successors, or for any person or persons acting in that behalf by Our or Their authority, to cut and take away any such indigenous timber, and to search and dig for and carry away any stones or other materials which may be required for making or keeping in repair any roads, tramways, railways, railway stations, bridges, canals, towing paths, harbour works, breakwaters, river improvements, drainage, or irrigation works, and generally for any other works or purposes of public use, utility or convenience, without making to the Lessee or any person claiming under him, any compensation in respect thereof, and we do hereby save and reserve to Us, our Heirs and Successors, all mines of gold, silver, copper, tin or other metals, ore, and mineral, or

other substances containing metals, and all gems and precious stones, and coal or mineral oil, and all phosphatic substances in and under the said land, with full liberty at all times to search and dig for and carry away the same; and for that purpose enter upon the said land or any part thereof: and we do hereby save and reserve to Us, our Heirs and Successors, all petroleum (as defined in the *Petroleum Act, 1967*) on or below the surface of the said land with the right reserved to Us, our Heirs and Successors and persons authorised by Us, our Heirs and Successors to have access to the said land for the purpose of searching for and for the operations of obtaining petroleum in any part of the said land subject to and in accordance with the *Petroleum Act, 1967* or any Act repealing and enacted in substitution of that Act: Provided also, that if the said Lessee shall, during the term hereby created, at any time make default in payment of the rent hereby reserved, or shall fail or cease to use, hold, and enjoy the said land for the said special purpose, it shall thereupon be lawful for Us, our Heirs and Successors into and upon the said demised premises, or any part thereof in the name of the whole to re-enter, and the same to have again, repossess, and enjoy as if this deed-poll had never been executed, without making any compensation to the said Lessee.

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[Faint, illegible text]

[Faint, illegible text]

[Faint, illegible text]

[Faint, illegible text]

SCHEDULE OF CONDITIONS

This lease is issued subject to the following additional conditions:-

1. The land shall not be used for any purpose other than "Grazing" without the prior approval in writing of the Minister for Lands.
2. The lease shall be renewable at the will of the Minister and subject to determination at three months' notice by either party after the initial term of one (1) year. Should the lease be so renewed, the rental fixed may be reappraisal at such amount as such amount as the Minister may at any time and from time to time determine.
3. The Lessee shall pay cost of survey when called upon.
4. The Lessee shall not without the previous consent in writing of the Minister assign, transfer, mortgage, sublet or part with the possession of the demised land.
5. The land shall be occupied and used by the Lessee for the purpose specified within nine (9) months of the commencement of the lease and thereafter shall be continuously so used to the satisfaction of the Minister.
6. All buildings, erections, paving, drainage and other works shall be to the approval of the Local Authority and the Lessee shall perform, discharge and execute all requisitions and works unto the demised land as are or may be required by any local or public authority operating under any statute, by-law or regulation.
7. The Lessee shall, within twelve (12) months from commencement of the lease, fence the external boundaries with a stock proof fence to the satisfaction of the Minister.
8. No structures will be erected without the prior approval in writing of the Minister.
9. The Lessee shall indemnify the Minister against all claims for damage to property or persons arising from the use of the land.
10. The Minister or his representative may enter the land to inspect the property at any reasonable time.
11. Compensation will not be payable for damage by flooding of the demised land.

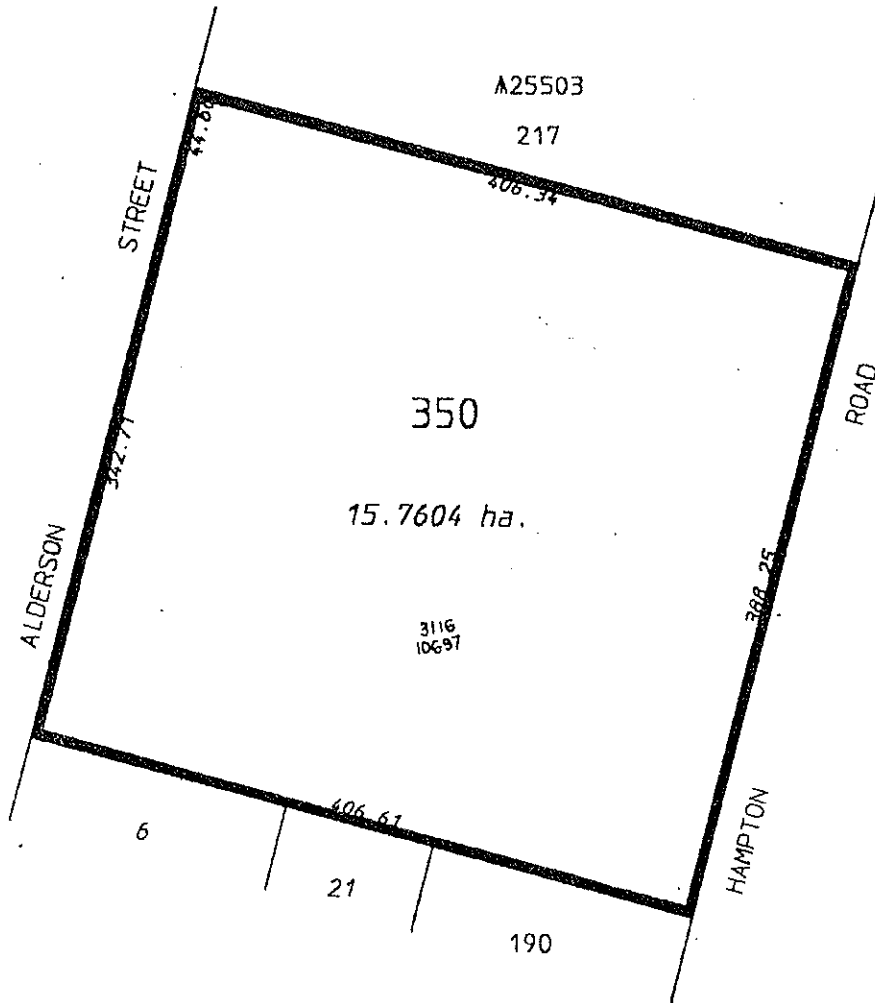
12. Compensation shall not be payable to the lessee in respect of any improvements effected by him on the demised land and remaining thereon at the expiration or earlier determination of the lease.
13. It shall be lawful for the lessee at any time within the three calendar months immediately following the expiration of the term or earlier determination of the lease, to take down, remove and carry away any buildings, structures, improvements and plant, the property of the Lessee.
14. On determination of the lease, the Lessee shall fill in, consolidate and level off any unevenness, excavation or hole caused by him during the term of the lease or by removal of his improvements and shall leave the demised land in a clean, neat and tidy condition to the satisfaction of the Minister and shall remove any or all waste matter as required by the Minister.
15. Power is reserved to the Minister to direct that the number of stock depasturing on the demised land shall be reduced if the Minister is of the opinion that the demised land is overstocked to an extent sufficient or likely to cause permanent damage to the land; failure to comply with any such direction will result in the forfeiture of the lease.



An Officer authorised

By order of the Minister for Lands

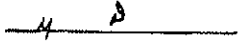
PLAN HEREIN REFERRED TO



Survey : DIA.90417
 Public : PINJARRA 2000 14.28 & 14.29
 Plan(s)

Corr : 1278/1968

Scale: 1 : 4000



Dated this *Eighth* day of *January*
 19 *91*.

An Officer authorized,
 By order of the Minister for Lands.

Draft Descriptions - Pinjarra Town Area

B.J. Keighery 1996 DEP

AREA DESCRIPTION

Suggested name of area (1996)

System 6 (1984)

Some Other Commonly used Names:

Subm 98 Hampton Road bushland, Pinjarra

Area (ha):

48 ha, 60% modified remnant
vegetation (Ag WA GIS), 80%
bushland (aerial photo)Zoning (MRS & town
planning)

Local Authorities (Suburb)

Murray

Ownership categories: Street name, Lot number

Lots 217, 309 & 299 Aboriginal Lands Trust; Lot 350 DOLA;

Lot 296&295 State Housing Commission

Reserve Status

LANDFORM AND SOIL

Landscape features: vegetated wetland (including claypan), vegetated uplands

Geomorphology and soils

Pinjarra Plain

Guildford formation (Qpa)

Bassendean Dunes

Bassendean sands (Qpb)

Bassendean Dunes/Pinjarra Plain

Bassendean sands over Guildford Formation (Qpb/Qpa)

REGIONAL VEGETATION AND FLORA

Vegetation Complex

Pinjarra Plain

Guildford Complex

Bassendean Dunes

Bassendean Complex - Central and South

Floristic Community Types

Supergroup 2: Seasonal Wetlands

4 *Melaleuca preissiana* damplands

5 Mixed shrub damplands

12 *M. teretifolia* and / or *Asteria* aff. *fascicularis* shrublands

Supergroup 3: Uplands, centred on Bassendean Dunes and the Dandaragan Plateau

21a Central *Banksia attenuata* - *E. marginata* woodlands**REGIONAL WETLAND**

Wetland Types: dampland, palusplain

Consanguineous suite

Pinjarra Plain

Keysbrook (P.1)

Wetland Management Objective: not mapped

Lake EPP: none identified

THREATENED COMMUNITIES/SPECIES

Not assessed

AREA DESCRIPTION

Vegetation and Flora

Structural units: (limited survey)

Eucalyptus calophylla Woodland, *Banksia attenuata* *Allocasuarina fraseriana* Woodland, *Hakea*, *Pericalymma* and
Melaleuca Shrublands, Herblands and *Leptocarpus* Sedglands.Vegetation Condition: 75% Excellent to Very Good with <25% Good to Degraded, with areas of severe
localised disturbance

Total Flora: 138 (site generated list only, estimated >50% expected flora)

DRF/Priority - GIS: 4 ID

DRF/Priority and significant flora - *Aponogeton hexatepalus* (R), *Stylidium longitubum* (3), *Stylidium*
mimeticum (3), *Rhodanthe pyrethrum* (3), *Myriophyllum echinatum* (3)*Stylidium utricularioides*, *Acacia lasiocarpa* "Pinjarra"**Fauna**

Mammals: not surveyed; submission refers to Bandicoots, kangaroos and mice.

Linkage: no adjacent bushland

Special Attributes: submission refers to Bandicoots, kangaroos and mice as well as the value of bush food
plants.

Draft Descriptions - Pinjarra Town Area

B.J. Keighery 1996 DEP

INTERNATIONAL AND NATIONAL SIGNIFICANCE

Not listed

CONSERVATION RECOMMENDATIONS

Criteria met for inclusion: eg XX, XY Y

Constraints:

Recommendation:

Draft Descriptions - Pinjarra Town Area

B.J. Keighery 1996 DEP

AREA DESCRIPTION

Suggested name of area (1996)

System 6 (1984)

Some Other Commonly used Names:Pinjarra industrial area, Threatened &/or poorly res
vegetation**Area (ha):**43ha, 100% modified remnant
(Ag WA GIS), 90% bushland (aerial
photo)**Local Authorities (Suburb)****Zoning (MRS & town planning)****Ownership categories: Street name, Lot number****Reserve Status**

part Nature Reserve

LANDFORM AND SOIL**Landscape features:** Freshwater lake, vegetated wetlands**Geomorphology and soils**

Bassendean Dunes

Bassendean sands (Qpb)

Bassendean Dunes/Pinjarra Plain

Bassendean sands over Guildford Formation (Qpb/Qpa)

REGIONAL VEGETATION AND FLORA**Vegetation Complex**

Bassendean Dunes

Bassendean Complex - Central and South

Floristic Community Types: *not sampled types inferred**Supergroup 1 - Foothills/Pinjarra Plain**3a *E. calophylla* - *Kingia australis* woodlands on heavy soils**Supergroup 2: Seasonal Wetlands***4 *Melaleuca preissiana* damplands

*5 Mixed shrub damplands

9 Dense shrublands on clay flats

*11 Wet forests and woodlands

*13 Deeper wetlands on heavy soils

REGIONAL WETLAND**Wetland Types:** dampland (sumpland, not mapped), palusplain**Consanguineous suite**

Pinjarra Plain

Keysbrook (P.1)

Wetland Management Objective: Resource Enhancement, Multiple Use**Lake EPP:** none identified**THREATENED COMMUNITIES/SPECIES**

Not assessed, Critically Endangered (floristic community type 3a), Vulnerable (floristic community type 9)

AREA DESCRIPTION**Vegetation and Flora****Structural units:** (limited survey)*Eucalyptus rudis* Forest, *E. calophylla* Woodlands, *Melaleuca raphiophylla* Woodlands, *Viminaria*, *Regelia*,
Banksia, *Hakea*, *Periclymna*, *Melaleuca* and mixed Shrublands, Herblands and *Leptocarpus* and other Sedgeland.**Vegetation Condition:** >75% Excellent to Good, Degraded with <25% Degraded, with areas of severe
localised disturbance.**Total Flora:** not knownDRF/Priority - GIS: 1 R (*Quercus parvifolia*)DRF/Priority and significant flora - *Centrolepis caespitosa* (R), *Rhodanthe pyrethrum* (3), *Synaphea acutiloba*
(3), *Stylidium longitubum* (3)*Chamaescilla* aff. *spiralis* (GJK 12501), *Drosera radicans*, *Stylidium utricularioides***Fauna**

Mammals: not surveyed (Quenda habitat)

Linkage: bushland linkage to north across road**Special Attributes:****INTERNATIONAL AND NATIONAL SIGNIFICANCE**

Not listed

CONSERVATION RECOMMENDATIONS**Criteria met for inclusion:** eg XX, XY Y

Draft Descriptions - Pinjarra Town Area

B.J. Keighery 1996 DEP

Constraints:

Recommendation:

**PRS AMENDMENT NO. 012/33A
DRAFT SUMMARY OF SUBMISSIONS**

Submission: 3

Submitted by: Mr Ron Robertson

Nature of Interest: ??

Affected Land: Lots 295, 350 & 354 Alderson Street and Lots 299 & 309 Hampton Road

Summary of Submission:

1. The economic return from this land will be of far more use to the Shire of Murray if it is developed than if it is retained as bushland. (eg. rates, money for local businesses and the area, i.e. schools, sporting bodies). Economic return from open space areas is low unless there are attractions such as mountains and gorges. Also, small open space areas add costs to the local government for management.
2. Lots 299, 309, 350 & 354 should be sold and the money used to build a viable Aboriginal heritage/cultural centre on Reserve 31032 (where the Battle of Pinjarra took place). This centre will be of more benefit to the Aboriginal community than a few acres of bush.
3. This is another example of Pinjarra and the Shire of Murray being unfairly treated. This imbalance needs to be considered in order for development in the Shire.
4. According to *The Western Australian*, Ms MacTiernan has advised that 60% of all future residential development will be within existing cities, leaving 40% in the remainder of the State. We need development away from the coast and housing costs kept down.
5. Rare plants are stated as a reason why these lots should be reserved as ROS. How rare are these plants and what are they called? I have never been able to find these anywhere, or anyone who can name them.
6. Lot 295 was sold by the Department of Housing and Works (DHW) about three years ago. However, the *amendment report* states the land was known as a *Natural Resource Protection Area* in 1997. Why was the land sold? Was it wrong to sell it? The *amendment report* never mentions that this land was sold quite recently.

Planning Comment:

1. While financial matters receive appropriate consideration, economic return is not the principal determinant in relation to the reservation of land for Regional Open Space (ROS). In this case, the value of the land for ROS purposes relates to its value for conservation purposes, Aboriginal culture and regional landscape.
2. The locations comprising Lots 299, 309, 350 & 354 and Reserve 31032 both have specific significance in terms of indigenous history and culture and both need to be protected by ROS reservations. Bushland holds significance in Aboriginal culture.
3. The interests of Pinjarra are not measured only in relation to the amount of development that may occur but by the in terms of the overall balance and structure of land use. As part of the overall land use pattern, reservation of this land for Regional Open Space will be in the long term interest of Pinjarra, through the benefits referred to in (1), above.
4. Considerable areas have been identified for residential development within the Shire of Murray, including Pinjarra. Also, see 3, above.
5. The reasons for reservation of the land relate to its values for conservation purposes, Aboriginal culture and regional landscape. In relation to just conservation values, the area subject of the proposed amendment is significant because it contains significant remnant vegetation, upland and wetland areas and significant rare flora. The vegetation complexes at this location and information about significant plant species occurring on the land have been published, or can be obtained from the Department of Environment and Conservation (formerly Western Australian Herbarium). The species on the overall amendment site have been identified in the *System 6 Update Survey Programme, 1995* and recent surveys of Lot 295 by Landform Research.
6. Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land within the Regional Open Space reservation.

For information, Department of Housing and Works has advised that the contract documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

Determination:

1. Dismissed.
 2. Dismissed.
 3. Dismissed.
 4. Noted.
 5. Noted.
 6. Noted.
-

7. There is no evidence to suggest the land should be included within ROS and no detailed on-site assessment has been undertaken (apart from those by Mr Lindsay Stephens and Dr Vic Semeniuk on behalf of the owners).
8. To include Lot 295 within the ROS reservation on the basis that it is considered regionally significant for environmental reasons would be an error of law reviewable by the Supreme Court.

Planning Comment:

1. The wetlands on Lot 295 have been reviewed, in terms of both delineation and evaluation, on several occasions since mapping for the publication *Wetlands of the Swan Coastal Plain* was undertaken. These reviews include the following :
 - Wetland Assessment for Lot 295 Alderson Street, Pinjarra by Landform Research in support of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171;
 - Review of Geomorphic Wetlands Swan Coastal Plain Dataset for Lot 295 Alderson Street, Pinjarra conducted by the Department of Environment in response to a request for reclassification by the landowners' planning consultant;
 - Investigations for the formal Environmental Assessment of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171; and
 - Report on the Wetlands, Lot 295 Alderson Street, Pinjarra by V & C Semeniuk Research Group, commissioned in support of this submission on Peel Region Scheme Amendment 012/33A.

Notwithstanding any variation in detail between the subsequent reviews, all conclusively indicate the presence of regionally significant wetlands on Lot 295.

2. The conservation value of wetlands on Lot 295 is not the only reason for the proposal to include this land in the Regional Open Space reservation. Reservation of the area subject of PRS Amendment 012/33A has been proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape. The conservation values of Lot 295 relate to the presence of wetlands, uplands, remnant vegetation (range and quality) and wildlife habitat. All parts of Lot 295 require protection in relation to some or all of these values. In regard to wetlands only, assessments by the consultants commissioned by the landowners and ground analysis by experts from State government agencies all show that regionally significant wetlands exist on Lot 295.
3. Land may be included within the Regional Open Space reservation under the Peel Region Scheme for the purposes set out in clause 10(a) of the Peel Region Scheme. This states that the purpose of the reservation is to protect the natural environment, provide recreational opportunities,

Submission: 5

Submitted by: Mr Tim Houweling of *cornerstone legal* on behalf of Ifafa Pty Ltd and Peter John and Yvonne Robertson

Nature of Interest: Legal representative for owners of Lot 295

Affected Land: Lot 295 Alderson Street, Pinjarra

Summary of Submission:

1. Inclusion of Lot 295 as a wetland by the Department of Environment (DoE) is based on mapping undertaken for *Wetlands of the Swan Coastal Plains*. This mapping used a broad based approach and for that reason can be reviewed by the DoE. *Wetlands of the Swan Coastal Plains* can not be relied upon as errors have been found in the methods used to gather and record information.
2. Two environmental reviews of the subject land have been undertaken on behalf of the owners :
 - (i) Mr Lindsay Stephens (of Landform Research); and
 - (ii) Dr Vic Semeniuk (V & C Semeniuk Research Group).

Dr Semeniuk and Mr Stephens agree to a regionally significant wetland on the western boundary of Lot 295 and Dr Semeniuk identifies two additional regionally significant wetlands on the land.

It is evident from the reviews by Mr Lindsay Stephens and Dr Semeniuk that inclusion of Lot 295 within ROS for wetland purposes has not been supported by a ground analysis.

3. Areas not environmentally significant or with no regional features should not be reserved as ROS. If the Western Australian Planning Commission includes areas as ROS with no evidence supporting their inclusion, then a review by way of Writ of Certiorari in the Supreme Court is available.
4. Quite clearly, a Writ of Certiorari is not the preferred option and the owners of Lot 295 are prepared to have portions of their land reserved as ROS where the balance is zoned for urban development.
5. The land was sold by the DHW concealing the fact that it was, or may have been considered environmentally significant.
6. At the hearing, we reserve the right to present further evidence as a result of our Freedom of Information requests, and additional time is requested rather than a brief hearing.

safeguard important landscapes and provide for public access. Comments regarding possible legal options are noted.

4. Most of Lot 295 has conservation values relating to both wetlands and remnant vegetation together with landscape values relating to the whole of the site. Use of any portion of Lot 295 for urban development would conflict with conservation, recreation and landscape values that would be available through the assemblage of a contiguous 43 hectare area of regional open space comprising a combination of wetlands and uplands, including a range of vegetation types and habitat values.

Moreover, the inclusion of urban uses within Lot 295 would have a detrimental effect upon the condition of the wetlands and vegetation within Lot 295 in terms of edge effects and management problems.

5. Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land within the Regional Open Space reservation.

For information, the contract documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

6. Noted. Additional time has been allocated.
7. Reservation of the area subject of PRS Amendment 012/33A was proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

In a purely environmental context, the area subject of the amendment is considered locally and regionally significant because of the quality and range of vegetation types, including both wetland and upland areas, the presence of significant and rare flora, and its wildlife habitat value. This significance of these considerations is greatly increased by the amount of clearing that has taken place in the area and by the presence of Conservation Category Wetlands on Lots 295 and 350.

Lot 295 has self-evident landscape value. Successive reviews over the past fourteen years have reiterated the conservation values of the land. In this respect, Lot 295 has been inspected by numerous experts (including Mr Stephens and Dr Semeniuk) on numerous occasions.

8. See 3, above.

Determination:

1. Noted.
2. Dismissed.
3. Noted.
4. Noted.
5. Dismissed.
6. Noted.
7. Dismissed.
8. Dismissed.

Submission: 5

Submitted by: Mr Tim Houweling of *cornerstone legal* on behalf of Ifafa Pty Ltd and Peter John and Yvonne Robertson

Nature of Interest: Legal representative for owners of Lot 295

Affected Land: Lot 295 Alderson Street, Pinjarra

Summary of Submission:

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It is evident from the reviews by Mr Lindsay Stephens and Dr Semeniuk that inclusion of Lot 295 within ROS for wetland purposes has not been supported by a ground analysis.

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5. The land was sold by the DHW concealing the fact that it was, or may have been considered environmentally significant.
6. At the hearing, we reserve the right to present further evidence as a result of our Freedom of Information requests, and additional time is requested rather than a brief hearing.

7. There is no evidence to suggest the land should be included within ROS and no detailed on-site assessment has been undertaken (apart from those by Mr Lindsay Stephens and Dr Vic Semeniuk on behalf of the owners).
8. To include Lot 295 within the ROS reservation on the basis that it is considered regionally significant for environmental reasons would be an error of law reviewable by the Supreme Court.

Planning Comment:

1. The wetlands on Lot 295 have been reviewed, in terms of both delineation and evaluation, on several occasions since mapping for the publication *Wetlands of the Swan Coastal Plain* was undertaken. These reviews include the following :
 - Wetland Assessment for Lot 295 Alderson Street, Pinjarra by Landform Research in support of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171;
 - Review of Geomorphic Wetlands Swan Coastal Plain Dataset for Lot 295 Alderson Street, Pinjarra conducted by the Department of Environment in response to a request for reclassification by the landowners' planning consultant;
 - Investigations for the formal Environmental Assessment of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171; and
 - Report on the Wetlands, Lot 295 Alderson Street, Pinjarra by V & C Semeniuk Research Group, commissioned in support of this submission on Peel Region Scheme Amendment 012/33A.

Notwithstanding any variation in detail between the subsequent reviews, all conclusively indicate the presence of regionally significant wetlands on Lot 295.

2. The conservation value of wetlands on Lot 295 is not the only reason for the proposal to include this land in the Regional Open Space reservation. Reservation of the area subject of PRS Amendment 012/33A has been proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape. The conservation values of Lot 295 relate to the presence of wetlands, uplands, remnant vegetation (range and quality) and wildlife habitat. All parts of Lot 295 require protection in relation to some or all of these values. In regard to wetlands only, assessments by the consultants commissioned by the landowners and ground analysis by experts from State government agencies all show that regionally significant wetlands exist on Lot 295.
3. Land may be included within the Regional Open Space reservation under the Peel Region Scheme for the purposes set out in clause 10(a) of the Peel Region Scheme. This states that the purpose of the reservation is to protect the natural environment, provide recreational opportunities,

safeguard important landscapes and provide for public access. Comments regarding possible legal options are noted.

4. Most of Lot 295 has conservation values relating to both wetlands and remnant vegetation together with landscape values relating to the whole of the site. Use of any portion of Lot 295 for urban development would conflict with conservation, recreation and landscape values that would be available through the assemblage of a contiguous 43 hectare area of regional open space comprising a combination of wetlands and uplands, including a range of vegetation types and habitat values.

Moreover, the inclusion of urban uses within Lot 295 would have a detrimental effect upon the condition of the wetlands and vegetation within Lot 295 in terms of edge effects and management problems.

5. Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land within the Regional Open Space reservation.

For information, the contract documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

6. Noted. Additional time has been allocated.

7. Reservation of the area subject of PRS Amendment 012/33A was proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

In a purely environmental context, the area subject of the amendment is considered locally and regionally significant because of the quality and range of vegetation types, including both wetland and upland areas, the presence of significant and rare flora, and its wildlife habitat value. This significance of these considerations is greatly increased by the amount of clearing that has taken place in the area and by the presence of Conservation Category Wetlands on Lots 295 and 350.

Lot 295 has self-evident landscape value. Successive reviews over the past fourteen years have reiterated the conservation values of the land. In this respect, Lot 295 has been inspected by numerous experts (including Mr Stephens and Dr Semeniuk) on numerous occasions.

8. See 3, above.

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LOT 295 ALDERSON STREET, PINJARRA - BACKGROUND IN RELATION TO CONSERVATION VALUES

Introduction

Lot 295 Alderson Street (Figure 1) has an area of 18.2 ha. No development has taken place on the land excepting for the forming of a drain that extends from the north-east, to the north-west corner of the site. The site comprises a combination of wetlands and uplands, containing a range of vegetation types, mostly in good-excellent, or excellent condition. Wetlands on the site are classified Conservation Category Wetland which is the highest classification. Vegetation on the site is representative of the Bassendean Central and South Vegetation Complex which is a priority for protection. Lot 295 is located in a part of the Swan coastal plain where extensive clearing has taken place.

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The following information sets out the chronology of events relating to the environmental values of the land :

1. **Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain**

Map 1.
 e-mail
 vdt

In 1992, the report *Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain* (Keighery B, and Trudgen M) was published. This was a appraisal of remnant vegetation in the area between Background investigations for the study included an inspection of Lot 295 and the report recommended this site be regarded as a possible conservation area.

edge

2. **System 6 Update Survey Programme, 1995**

As part of the System 6 Update Survey Programme, the site was surveyed in November 1995 by a botanical team from the (then) Department of Environmental Protection. Four floristic communities, seven significant flora and a diversity of native plant species were identified. The significance of the site for birdlife was also noted.

on the eastern side of the SCP between Pinjarra and Gingin, the study was initiated by CALM with national funding due to concern over the high level of clearing of the alluvial soils of the SCP.

3. **Wetlands of the Swan Coastal Plains Volume 2B: Wetland Mapping Classification and Evaluation, Wetland Atlas (1996)**

A wetland database for the Swan Coastal Plain forms part of the publication *Wetlands of the Swan Coastal Plains Volume 2B: Wetland Mapping Classification and Evaluation, Wetland Atlas*. Prepared by the Semenuik Research Group in 1996, this delineated and classified wetlands on the coastal plain between X and Y, and included those on Lot 295 (Figure 2).

Wetlands

4. **Inner Peel Region Structure Plan, 1997**

In 1997, the *Inner Peel Region Structure Plan* identified Lot 295 as being low-lying, prone to saturation and flooding during the wet season, and notable for the presence of rare flora and threatened communities. It included Lot 295 within the classification *Natural Resource Protection Area - Subject to Further Study* (Figure 3). This classification applies to areas of bushland in good condition, requiring further studies to determine appropriate mechanisms for their protection.

5. **Evaluation of Wetlands of the Southern Swan Coastal Plain (1998)**

Prepared by V & C Semenuik, *Evaluation of Wetlands of the Southern Swan Coastal Plain* (1998) evaluated the wetlands already identified and delineated in the 1996 study (see 3, above) and extended the areas identified, delineated and evaluated to include areas south of Mandurah. As part of this study, the wetland on Lot 295 was evaluated and determined to be a Conservation management category wetland.

6. **Pinjarra Urban Expansion Plan, 1998**

In 1998, the Shire of Murray's *Pinjarra Urban Expansion Plan* included Lot 295 within Precinct 4 Pinjarra West of the strategy precinct plan. One of the key objectives for this 455 ha precinct is "to protect areas of significant remnant vegetation that exists in pockets within the area". The plan included Lot 295 (18 ha) within the classification, *Subject to Resource Protection Study* (Figure 4) and stated that development within the Natural Resource Protection Area (defined in the *Inner Peel Region Structure Plan*) should be subject to a full study to protect significant remnant vegetation.

7. **Shire of Murray Town Planning Scheme No. 4 Amendment No. 171**

In November 2002, the Shire of Murray initiated an amendment to its town planning scheme to rezone Lot 295 from Rural to Special Rural, to enable the land to be subdivided into eight lots of ranging in size from 2.0 to 2.8 ha (Figure 5) (ie. Amendment No. 171). The proposed amendment included an indicative layout for future special residential subdivision into 4,000 - 5,000m² lots. In July 2003, the EPA requested additional information in regard to the environmental values of Lot 295.

8. **Wetland Assessment, Lot 295 Alderson Street, Pinjarra (Landform Research)**

In February 2004, a report was prepared by Mr Lindsay Stephens (Landform Research) in response to the EPA request for additional information. This set out the findings from surveys undertaken during July and December 2003, and June 2004, and made the following observations :

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Data

Wetlands
Difference
two

Both Ministers
opposed, esp
Environment

Strategy, basis re-zoning

- The Geomorphic Wetland Mapping Dataset (the Conservation Category Wetland) extends wider than the wetlands defined by this study, ie. into areas of Banksia Woodland. Ground mapping (Stephens) is regarded as more accurate.
- There are two wetlands on the site. These are the western wetland comprising the *Pericalymma ellipticum* *Hypocalymma angustifolium* Heathland and the Myrtaceous Shrubland shown on Figure 6, and the drain which forms a disturbed wet area.
- The western wetland has High Conservation value because this type of vegetation has been predominantly cleared, locally. As such, there is potential for rare species and two Priority species have been recorded.
- Myrtaceous shrubland in the western wetland is likely to contain less common species and has been predominantly cleared, locally, and is recommended for preservation.
- Plant communities of the *Pericalymma* Heathland are present. While well-reserved, these are acknowledged as Vulnerable. This heathland forms part of the buffer to the Myrtaceous shrubland.
- Plant communities of the Banksia Woodland are present. These are well reserved on the Swan Coastal Plain, with a Conservation Status of Low Risk.
- No Declared Rare taxa were identified.
- Two Priority taxa were recorded.
- Priority 3 taxa in the north of Lot 295 are not under immediate threat.
- The sand ridge vegetation, which is dominated by Banksia Woodland, is generally in Good condition, varying from Fair to Good - Excellent.
- Weeds are spreading from the north-east corner and as edge effects along the roadside and firebreaks.

The Stephens report noted that the land falls within the Guildford Complex and the fact that this complex has only 5% remaining. Of the remaining vegetation, 143 hectares is in secure tenure, representing 0.2% of the pre-1750 extent of the vegetation.

Mapping in the Stephens report indicates most of the vegetation within Lot 295 (Figure 7) is either Good-Excellent or Excellent condition.

9. **Review of Geomorphic Wetlands Swan Coastal Plain Dataset for Lot 295 Alderson Street, Pinjarra**

In November 2004, the Department of Environment (DoE) inspected Lot 295 and reviewed a submission from the landowners' planning consultant for reclassification of the land in the Geomorphic Wetlands Swan Coastal Plain Dataset. Minor variation was made to the wetland boundaries but the DoE did not support reclassification of a large proportion to 'no longer a wetland' as the DoE did not support the

conclusion that the area in discussion 'does not support wetland dependent vegetation'.

Some increase in the area defined as Conservation Category Wetland was made (Figure 8). The analysis and site verification of the newly-identified wetland areas was undertaken by the DoE. It determined these to be significant on the basis of naturalness, reflected by the quality and diversity of vegetation, contiguity with upland vegetation, context of the remnant's values within a highly-cleared landscape, habitat values and presence of significant flora. It also stated that the wetland areas are valuable on the basis of their representativeness of the wetland suite-type group. The evaluation of these wetlands was upgraded to Conservation Category Wetlands in the *Geomorphic Wetlands Swan Coastal Plain* dataset.

10. **EPA Determination of Amendment No. 171**

On 6 December 2004, the Environmental Protection Authority advised that Amendment No. 171 had been determined under section 48A of the Environmental Protection Act as being incapable of being made environmentally acceptable, due to the following (in brief) :

- Clearing of vegetation deemed to be regionally significant - this referred to the quality and diversity of vegetation, combination of wetland and uplands, significant flora and habitat value for regionally-significant birdlife; and
- Impacts on wetlands - this referred to the naturalness, quality and diversity of vegetation, contiguity with upland vegetation, habitat value and significant flora.

11. **Determination of Amendment No. 171 under Section 48A(2)(b) of Environmental Protection Act by Minister for the Environment**

On 21 December 2004, the Minister for the Environment consulted the Minister for Planning and Infrastructure on her proposed determination of Amendment No. 171 under the Environmental Protection Act, advising that she concurred with the EPA assessment and that acceptance under section 48F(2) of the EP Act was requested.

On 9 June 2005, the Minister for Planning and Infrastructure advised the Minister for the Environment that she concurred that the amendment is not capable of being made environmentally acceptable. The Minister for Planning and Infrastructure also wrote to the Chairman of the Western Australian Planning Commission, requesting that an amendment be initiated to the Peel Region Scheme to include the land in the Regional Open Space reservation, to allow the landowner to seek compensation.

On 5 July 2005, the Minister for the Environment advised under section 48A(2)(b) of the Environmental Protection Act that Amendment No. 171 should not be implemented.

The process for Ministerial consideration of Amendment No. 171 included the provision of written advice to both Ministers. In this respect, the information and conclusions contained in the studies outlined above were taken into account and the environmental values of the land were verified by means of detailed inspections of the land, carried out by expert representatives of the Department of Environment and expert representatives of the Department for Planning and Infrastructure (who included qualified and experienced botanists) on two occasions.

The re-evaluation of the site as part of this process concluded that the environmental values of the site are as follow :

- **Representation of ecological communities** : The bushland of Lot 295 is representative of the Bassendean Central and South vegetation complex. Of the original extent of this complex on the Swan Coastal Plain, less than 27% remains. Only 0.7% of the original extent is in secure tenure (National Parks, Nature Reserves, Conservation Parks and 5g Reserves managed by CALM). Therefore, any bushland of Bassendean Central and South complex is a priority for protection.
- **Diversity** : The bushland on Lot 295 contains uplands and wetlands, and a variety of vegetation units from four floristic community types. Three surveys conducted by Landform Research have identified 111 flora taxa.
- **Protection of wetland, streamline, and estuarine fringing vegetation and coastal vegetation** : The majority of Lot 295 contains a Conservation Category Wetland (CCW). Most of the area classified as a CCW is also on the register of the *Revised Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy 2004*.

12. **PRS Amendment 012/33A (Regional Open Space - West Pinjarra)**

On 19 August 2005, the Peel Region Planning Committee of the Western Australian Planning Commission resolved to initiate Amendment No. 012/33A of the Peel Region Scheme. This proposes to include Lot 295, together with Lots 299, 309, 350, 354 and portion of the Alderson Street road reserve (Figure 9), within the Regional Open Space reservation.

Reservation of this area was proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

In a purely environmental context, the area subject of the amendment is considered locally and regionally significant because of the quality and range of vegetation types, including both wetland and upland areas, the presence of significant and rare flora, and its wildlife habitat value. This significance of these considerations is greatly increased by the amount of clearing that has taken place in the area and by the presence of Conservation Category Wetlands on Lots 295 and 350.

13. **Submission on PRS Amendment 012/33A - cornerstone legal**

A submission on Amendment No. 012/33A has been received from *cornerstone legal* on behalf of the owners of Lot 295. This places heavy emphasis on environmental matters and includes a report prepared by V & C Semeniuk Research Group (see below).

14. **Wetlands Report by V & C Semeniuk Research Group**

Commissioned by *cornerstone legal* and prepared in December 2005, this report is based on a field survey that included the collection and examination of soil samples. It examines the question of whether the whole of Lot 295 would be considered a wetland, or only part.

This was not a comprehensive botanical study but was intended to show species that inhabit the wetlands.

Under the heading, Description of the Regional Landscape, the report noted that throughout the region, there has been extensive clearing for agriculture and, as such, the local area of Lot 295 and adjoining terrain supports an isolated patch of remnant vegetation.

The report identifies four wetlands on Lot 295 (see Figure 10) and classified these as damplands (seasonally waterlogged) or sumplands (seasonally inundated). These wetlands are as follow :

Wetland 1 - vegetated dampland, 200m x 50m long; extends into adjoining lot;

Wetland 2 - forested sumpland, about 100m in diameter;

Wetland 3 - forested dampland, southern sectorial portion of the wetland that occurs in Lot 295, about 200m wide;

Wetland 4 - vegetated sumpland, about 300m long along western boundary; more complex, comprises four zones :

Zone A - peripheral transition zone;

Zone B - low heath to sedgeland;
Zone C - heath (in one of its wettest parts);
Zone D - heathland/woodland (in its other wettest part).

The report also states the following :

- Wetlands 1, 2 and 4 are regionally significant;
- Protection of these wetlands would require a buffer of 50 - 200m, depending on details of the intended land use.
- Wetland 3 is not regionally significant.

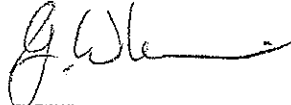
John Pride
Senior Project Planner
Peel Region Scheme

21 July 2006

o Fauna Info.

o Rorty

ECOLOGICAL SYSTEMS BRANCH
(TERRESTRIAL SECTION)
Internal Memorandum

ATTENTION: KEN DAWSON
FROM: JOHN DELL/BRONWEN KEIGHERY 
DATE: 24 NOVEMBER 2003
SUBJECT: SHIRE OF MURRAY TOWN PLANNING SCHEME NO. 4
AMENDMENT NO. 171- REZONING OF LOT 295 ALDERSON
STREET, PINJARRA

FILE NO.:

Written advice was requested on the adequacy of information provided on the above proposal. However it is important to give some background on this area before the information is considered.

Background

This area is part of a larger parcel of bushland, being contiguous with bushland to the east. The total area was investigated by DEP in 1995 as part of the System 6 Update Program. Four 10X10m plots were located in the area. Four floristic community types were identified in the area, seven significant flora and a diversity of native plant species (see Appendix 1 and 2). Consequently the area was considered to support regionally significant native vegetation. The values that lead to this conclusion include: quality of vegetation, diversity of vegetation types being both upland and wetland areas, presence of wetland vegetation units of heavy soils (eastern side of the Swan Coastal Plain communities), presence of significant flora and general high level of clearing in the area.

Preliminary information from other sources indicates that the site has high conservation value for birds. A one day survey in November 1995 by the WA branch of the Royal Australasian Ornithologists Union on the adjacent and contiguous vegetation recorded 25 bird species of which 3 species are of regional significance as having declined on the coastal Plain (Bush Forever 2000).

Comment from Area Visit

A brief edge assessment by the Department of Environment on 31 October 2003 recorded 18 bird species in Lot 195 including 4 species which are of regional significance as having declined on the coastal Plain (Bush Forever 2000). The reptile species, *Tiliqua rugosa* was also recorded.

Combining data from the above two surveys, 5 bird species of regional conservation significance have so far been recorded during very preliminary surveys of the area. This indicates that the site has regional significance for bird fauna. No information is currently available on the significance of the site for other vertebrate fauna.

Comment on Information

No information has been provided on the significance of fauna habitats present on the site and no assessment has been made on the fauna present or likely to be present.

Appendix 1:

Floristic Community Types.

Supergroup 2: Seasonal Wetlands

4 *Melaleuca preissiana* damplands

5 Mixed shrub damplands

12 *M. teretifolia* and / or *Astartea* aff. *fascicularis* shrublands

Supergroup 3: Uplands, centred on Bassendean Dunes and the Dandaragan Plateau

21a Central *Banksia attenuata* - *E. marginata* woodlands

DRF/Priority and significant flora - *Stylidium longitubum* (3), *Stylidium mimeticum* (3), *Rhodanthe pyrethrum* (3), *Myriophyllum echinatum* (3), *Aponogeton hexatepalus* (R) *Stylidium utricularioides*, *Acacia lasiocarpa* 'Pinjarra'

Site Based Flora List for Hampden Rd, Pinjarra (Subm no. 98)

(Hamp01-04, BJ Keighery 13/6/96)

Scientific Name

Common Name

Anthericaceae

Chamaescilla corymbosa

Blue Squill

Thysanotus arbuscula

Thysanotus multiflorus

Many-flowered Fringe Lily

Apiaceae

Actinotus glomeratus

Homalosciadium homalocarpum

Hydrocotyle callicarpa

Trachymene pilosa

Xanthosia huegelii

Small Pennywort

Native Parsnip

Aponogetonaceae

Aponogeton hexatepalus

Stalked Water-ribbons

Asteraceae

Brachyscome bellidioides

Hyalosperma cotula

* *Hypochaeris glabra*

Lagenifera huegelii

Podolepis gracilis swamp (GJK 13126)

Rhodanthe pyrethrum

Siloxerus humifusus

Flat Weed, Smooth Catsear

Coarse Lagenifera

Procumbent Siloxerus

- * *Sonchus oleraceus*
- * *Ursinia anthemoides*

Common Sowthistle
Ursinia

Casuarinaceae

Allocasuarina fraseriana

Common Sheoak

Centrolepidaceae

Aphelia cyperoides
Centrolepis aristata
Centrolepis inconspicua
Centrolepis mutica

Pointed Centrolepis

Colchicaceae

Burchardia congesta

Milkmaids

Cyperaceae

Cyathochaeta avenacea
Isolepis cernua
Isolepis oldfieldiana
Lepidosperma angustatum
Lepidosperma longitudinale
Mesomelaena graciliceps
Schoenus curvifolius
Schoenus odontocarpus
Schoenus rodwayanus

Nodding Club-rush

Pithy Sword-sedge

Dasypogonaceae

Dasypogon bromeliifolius
Lomandra hermaphrodita
Lomandra preissii
Lomandra sericea
Lomandra suaveolens

Pineapple Bush

Dilleniaceae

Hibbertia acerosa
Hibbertia racemosa
Hibbertia vaginata

Needle Leaved Guinea Flower
 Stalked Guinea Flower

Droseraceae

Drosera gigantea subsp. geniculata	Giant Sundew
Drosera nitidula	Shining Sundew
Drosera occidentalis	Minute Pygmy Sundew
Epacridaceae	
Conostephium pendulum	Pearl Flower
Conostephium preissii	
Euphorbiaceae	
Monotaxis occidentalis	
Stachystemon vermicularis	
Gentianaceae	
* Centaurium sp.	Centaury
* Cicendia filiformis	Slender Cicendia
Goodeniaceae	
Dampiera linearis	Common Dampiera
Lechenaultia expansa	
Haemodoraceae	
Anigozanthos viridis	Green Kangaroo Paw, Kurulbardang
Conostylis aculeata	Prickly Conostylis
Conostylis juncea	
Phlebocarya ciliata	
Tribonanthes violacea	
Haloragaceae	
Gonocarpus pithyoides	
Myriophyllum echinatum	Milfoil
Iridaceae	
Patersonia occidentalis	Purple Flag
Juncaceae	
* Juncus capitatus	Capitate Rush
Lamiaceae	

Hemiandra pungens	Snakebush
Lauraceae	
Cassytha micrantha Cassytha racemosa	Dodder Laurel
Lobeliaceae	
Lobelia tenuior	Slender Lobelia
Loganiaceae	
Mitrasacme paradoxa	Wiry Mitrewort
Loranthaceae	
Nuytsia floribunda	Christmas Tree, Mudja
Lycopodiaceae	
Phylloglossum drummondii	Pigmy Clubmoss
Mimosaceae	
Acacia huegelii Acacia lasiocarpa Pinjarra' Acacia saligna Acacia stenoptera	Panjang Orange Wattle, Kudjong
Myrtaceae	
Astartea aff. fascicularis "Brixton" MET Astartea aff. fascicularis Calothamnus lateralis Eucalyptus calophylla Eucalyptus marginata Hypocalymma angustifolium Kunzea ericifolia Melaleuca incana Melaleuca lateritia Melaleuca preissiana Melaleuca rhapsiophylla Melaleuca thymoides Pericalymma ellipticum	Marri, Mari Jarrah, Djara White Myrtle, Kudjid Spearwood, Pondil Grey Honeymyrtle Robin Redbreast Bush Moonah Swamp Paperbark Swamp Teatree

Scholtzia involucreta
Verticordia densiflora

Spiked Scholtzia
Dense Featherflower

Orchidaceae

Leporella fimbriata
Lyperanthus nigricans
Microtis media
Microtis orbicularis
* Monadenia bracteata
Prasophyllum drummondii
Pterostylis aff. nana
Thelymitra antennifera
Thelymitra flexuosa

Hare Orchid
Red Beak Orchid
Tall Mignonette Orchid
Dark Mignonette Orchid
South African Orchid
Swamp Leek Orchid
Broad-petalled Snail Orchid
Vanilla Orchid
Twisted Sun Orchid

Papilionaceae

Bossiaea eriocarpa
Daviesia physodes
Euchilopsis linearis
Eutaxia virgata
Gompholobium tomentosum
Hovea trisperma var. trisperma
Jacksonia furcellata
* Lotus angustissimus

Common Brown Pea
Swamp Pea
Hairy Yellow Pea
Common Hovea
Grey Stinkwood
Narrowleaf Trefoil

Philydraceae

Philydrella drummondii

Phormiaceae

Stypandra glauca

Blind Grass

Poaceae

Agrostis avenacea
* Aira caryophyllea
Amphibromus neesii
Amphipogon laguroides
* Briza maxima
* Briza minor
Danthonia occidentalis
Stipa compressa

Blown Grass
Silvery Hairgrass
Swamp Wallaby Grass
Blowfly Grass
Shivery Grass
Spear Grass

Proteaceae

Banksia attenuata	Slender Banksia, Piara
Banksia ilicifolia	Holly-leaved Banksia
Hakea sulcata	Furrowed Hakea
Hakea varia	Variable-leaved Hakea
Petrophile linearis	Pixie Mops

Restionaceae

Hypolaena exsulca	
Leptocarpus aristatus	Bearded Twine-rush
Leptocarpus roycei MS	
Loxocarya flexuosa	
Lyginia barbata	

Rutaceae

Eriostemon spicatus	Pepper and Salt
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Scrophulariaceae

Gratiola peruviana	Austral Brooklime
* Parentucellia viscosa	Sticky Bartsia

Selaginellaceae

Selaginella gracillima	Tiny Clubmoss
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Stylidiaceae

Levenhookia stipitata	Common/Pink Trumpet Stylewort
Stylidium brunonianum	Pink Fountain Triggerplant
Stylidium calcaratum	Book Triggerplant
Stylidium divaricatum	Daddy-long-legs
Stylidium guttatum	Dotted Triggerplant
Stylidium longitubum	Jumping Jacks
Stylidium mimeticum	
Stylidium piliferum	Common Butterfly Triggerplant
Stylidium utricularioides	Pink Fan Triggerplant

Tremandraceae

Tetratecha hirsuta "glabrous"	Black Eyed Susan
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Xanthorrhoeaceae

Xanthorrhoea preissii

Balga

ECOLOGICAL SYSTEMS BRANCH
(TERRESTRIAL SECTION)
NOTE FOR FILE

FROM: BRIDGET HYDER-GRIFFITHS/ JOHN DELL
DATE: 31 OCTOBER 2003
SUBJECT: SITE VISIT TO LOT 295 ALDERSON STREET, PINJARRA
(equivalent of System 6 Update floristic site hamp 03)

Did an edge inspection of the eastern and southern boundaries of the site. Walked along eastern boundary from Alderson Street.

Vegetation supports an overstorey of Marri with scattered *Melaleuca preissii*, *Allocasuarina fraseriana*, *Nuytsia floribunda* and *Regelia ciliata* over a diverse understorey. The wetter areas support patches of *Pericalymma* sp.

Birds recorded in remnant

Brown Honeyeater
Rainbow Bee-eater
Silvereye (Grey-breasted White-eye)
Rufous Whistler
Shinning Bronze Cuckoo
Grey Shrike-thrush
Striated Pardalote
Western Gerygone
Red-capped Parrot
Black-faced Cuckoo Shrike
Grey Fantail
Broadtailed Thornbill
Sacred Kingfisher (at nest hollow in Marri)
Yellow-rumped Thornbill

Western Grey Kangaroo
Bobtail



Figs 1 and 2: Eastern edge of Lot 295



Southern edge of property (Kwell Road). The vegetation supports elements of the above vegetation plus *Banksia attenuata* and *B. illicifolia*.

Birds recorded

Grey Butcherbird
Magpie
Raven
Black-faced Cuckoo Shrike
Brown Honeyeater
Western Gerygone
Splendid Fairy-wren



Fig 3: Southern edge of Lot 295

Summary

A total of 18 bird, 1 mammal and 1 reptile species were recorded for the whole site. Of the 18 species 4 (Grey Shrike-thrush, Yellow-rumped Thornbill, Splendid Fairy-wren and Broad-tailed Thornbill) are of regional significance as they have declined on the coastal Plain (Bush Forever 2000). This indicates that the site has regional significance for bird fauna.

Table 4: Remnant Vegetation of the Swan Coastal Plain Bioregion within the System 6/part System 1 (DEP 2002).**KEY****Vegetation Complex Name**

Name allocated to the vegetation complex by Heddle *et al.* (1980). Units with an asterisk (*) next to them were allocated a name from Matiske and Havel (1998).

Vegetation Complex No

Number allocated to the complex by Heddle *et al.* (1980).

Total pre-1750 extent (ha)

Pre-clearing extent of the vegetation complex on the SCP in the System6/part System 1 area. This was derived using Heddle *et al.* (1980) and Matiske and Havel (1998).

Present extent (1997/98) in the System 6/part System 1 area (ha)

The remaining area in 1997/98 of each vegetation complex as mapped by the National Land and Water Resource Audit (Commonwealth of Australia 2001b).

% of each remaining (1997/98) in the System 6/part System 1 area

The remaining area of the complex as a percentage of its pre-1750 extent.

Area in secure tenure (2002) (ha)

The remaining area of each complex in secure tenure.

(Secure tenure = National Parks, Nature Reserves, Conservation Parks and 5(g) Reserves from CALM Managed Lands 2002 GIS database).

% of each remaining of pre-1750 extent in secure tenure (2002)

The remaining area of the ecosystem in secure tenure as a percentage of its pre-1750 extent

Vegetation Complex (grouped by major landform element)	Vegetation Complex No.	Total pre-1750 extent (ha)	Present extent (1997/98) in the System 6/part System 1 area (ha)	% of each remaining (1997/98) in the System 6/part System 1 area	Area in secure tenure (2002) (ha)	% of each remaining of pre-1750 extent in secure tenure (2002)
Pinjarra Plain						
Guildford Complex	32	92,497	4,662	5.0	143	0.2
Combinations of Bassendean Dunes / Pinjarra Plain						
Southern River Complex	42	57,979	11,501	19.8	882	1.5
Bassendean Dunes						
Bassendean Complex-Central And South	44	87,477	23,624	27.0	572	0.7

EXTRACT from Final Guidance No. 10

January 2003

Guidance Statement for level of assessment for proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 region

Additional Reference

Gibson N, Keighery BJ, Keighery GJ, Burbidge AH & Lyons MN 1994 *A Floristic Survey of the Southern Swan Coastal Plain*. Unpublished Report for the Australian Heritage Commission prepared by the Department of Conservation and Land Management and the Conservation Council of WA, Perth, Western Australia.

Extra to report to
B2K 7/10/04

Additional Information, Vegetation, Lot 295, Alderson Street Pinjarra

11 June 2004

A wetland and vegetation assessment of Lot 295, Alderson Street, Pinjarra was undertaken to assess the potential of the site for a subdivision.

Studies of the vegetation were made on 15 July 2003, 20 November 2003 and 6 December 2003 by Lindsay Stephens to assess the vegetation and delineate the wetland, and search for Rare and Priority flora. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003, flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

This additional information is based on a site inspection on 4 June 2004, to provide a list of understorey vegetation within the *Melaleuca* Woodland and *Kunzea ericifolia* Thicket.

The previous vegetation studies were aimed at determination of wetlands rather than the sand ridge communities. The species in both the above communities had been determined to identify that they were not wetlands. The current information is to provide the understorey species within those communities.

The species were identified on 4 June 2004 by Lindsay Stephens and, whilst this was a winter survey, sufficient understorey species were identified to confirm that both communities were not wetlands, but rather the *Melaleuca* Woodland should be attributed to Community Type 21c (Gibson et al) and shown in the previous reports. The *Kunzea ericifolia* Thicket is probably also a sub-community type of Community Type 21c.

On June 4 the various areas of *Melaleuca* Woodland and *Kunzea ericifolia* Thicket, as shown on the Vegetation Assessment, were extensively walked and the plant species identified.

The vegetation is partially disturbed within these communities and it may be that the *Kunzea ericifolia* Thicket may have originally been cleared and represents rapid colonisation by *Kunzea ericifolia*.

This community is most like Community Type 21a and is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994, *A Floristic survey of the southern Swan Coastal Plain*, Unpublished Report for the Australian Heritage Commission, prepared by Department of Conservation and Land Management and Conservation Council of Western Australia Incl).

***Kunzea ericifolia* Thicket**

This is dominated by a thicket of *Kunzea ericifolia*, with reduced understorey and some groundcovers. Ground covers in this vegetation are dominated by species from the Banksia Woodland and the lower communities, such as *Phlebocarya ciliata*. The community has

different fungi and other ground species to other parts of Lot 295. The species noted on 4 June 2004 are listed in the table of species.

In summary, as stated in previous reports, the community is dominated by *Kunzea ericifolia* over an open understorey and ground cover, with patches of bare soil being common.

Typical species recorded were *Allocasuarina fraseriana*, *A. humilis*, *Dasypogon bromeliifolius*, *Hibbertia huegelii*, *Drosera erythrorhiza*, *Acacia pulchella*, *Astartea fascicularis*, *Hypocalymma angustifolium*, *Pterostylis vittata*, *Bossiaea eriocarpa*, *Lyginia barbata*, *Gompholobium tomentosum*, *Alexgeorgea nitens*, and *Desmocladius flexuosa*.

All of the species are species that occur on sand ridges, generally at lower elevations. There are also some species that do not occur in wetlands indicating that this community is not a wetland.

This community is most like Community Type 21c (Gibson et al, 1994) being lower in the landscape and thus located on moister soils of Bassendean Sands.

***Melaleuca* Woodland**

This consists of gradational species between *Banksia* Woodland. The dominating vegetation is scattered *Melaleuca preissiana* over shrub and groundcover vegetation of lower elevation *Banksia* Woodland. The vegetation is clearly related to *Banksia* Woodlands and contains *Banksias* and lower elevation species.

Although some species can extend into drier wetlands, the majority never occur in wetlands indicating that this community is not a wetland.

Species recorded included *Melaleuca preissiana*, *Eucalyptus calophylla*, *Banksia attenuata*, and *Allocasuarina fraseriana* over an under storey typified by *Jacksonia furcellata*, *Xanthorrhoea preissii*, *X. gracilis*, *Gompholobium tomentosum*, *Bossiaea eriocarpa*, *Phlebocarya ciliata*, *Daviesia decurrens*, *Acacia pulchella*, *Patersonia occidentalis*, *Burchardia umbellata*, *Damperia linearis*, *Dasypogon bromeliifolius*, *Lepidosperma squantum*, *Dasypogon bromeliifolius*, *Drosera erythrorhiza*, *Stylidium brunonianum*, *Hibbertia huegelii*, *Lyginia barbata*, *Hypocalymma angustifolium* and *Hovea elliptica*. Attached is a list of species recorded during the site inspection.

This community is also best listed as a type of Community Type 21c (Gibson et al) being located in small depressions of the sand ridge and thus located on moister soils of Bassendean Sands. *Melaleuca preissiana* is common in Community Type 21c, but on the basis of the ground and understorey species it is not classified as wetland.

The attached photos clearly show species typical of *Banksia* wood\ land adjacent to *Melaleuca preissiana*.

No Declared Rare taxa were identified during the inspection of 4 June 2004

Species list

The species lists below shows the species identified on site during the inspections of 15 July 2003, 20 November 2003 and 6 December 2003 and 4 June 2004.

The complete list of species for Lot 295 are included because they show wetland species that have been found elsewhere on Lot 295.

The species identified in the *Melaleuca* Woodland and *Kunzea ericifolia* Thicket on 4 June 2004 are shown.

Family	Species	Melaleuca	Kunzea
		Woodland 4 June 2004	ericifolia Thicket 4 June 2004
Amaranthaceae	<i>Ptilotus drummondii</i>		
Anthericeae	<i>Tricoryne elatior</i>		
	<i>Thysanotus patersonii</i>		X
Asteraceae	<i>Brachyscome pusilla</i>		
	<i>Craspaedia argillicola</i>		
	<i>Lagenophora huegellii</i>		
	<i>Myriocephalus appendiculatus</i>		
	<i>Podolepis gracilis</i>		
	<i>Vellereophyton dealabtum*</i>		
Casuarinaceae	<i>Allocasuarina fraseriana</i>	X	X
	<i>Allocasuarina humilis</i>		X
Colchicaceae	<i>Burchardia umbellata</i>	X	
Cyperaceae	<i>Cyathochaeta avenacea</i>		
	<i>Ficinia nodosa</i>		
	<i>Isolepis sp</i>		
	<i>Lepidosperma longitudinale</i>		
	<i>Lepidosperma squamatum</i>	X	
	<i>Mesommelaena tetragona</i>		
Dasyopogonaceae	<i>Acanthocarpus canaliculatus</i>		
	<i>Dasyopogon bromelifolius</i>	X	X
	<i>Lomandra preissii</i>		X
Dilleniaceae	<i>Hibbertia hypericoides</i>		
	<i>Hibbertia huegellii</i>	X	X
	<i>Hibbertia racemosa</i>		
Droseraceae	<i>Drosera erythrorhiza</i>	X	X
	<i>Drosera gigantea</i>		
	<i>Drosera pallida</i>		
Epacridaceae	<i>Leucopogon sp</i>	X	
	<i>Leucopogon conostephioides</i>	X	X
	<i>Leucopogon propinquus</i>		X
Euphorbiaceae	<i>Phyllanthus calycinus</i>		
Goodeniaceae	<i>Damperia linearis</i>	X	
	<i>Lechenaultia expansa</i>		
	<i>Lechenaultia floribunda</i>	X	
Haemodoraceae	<i>Anigozanthos manglesii</i>		
	<i>Anigozanthos viridus</i>		
	<i>Conostylis aculeata</i> subsp <i>aculeata</i>		
	<i>Conostylis caricinia</i>		
	<i>Haemodorum simplex</i>		
	<i>Haemodorum spicatum</i>		
	<i>Phlebocarya ciliata</i>	X	X
Hydrochritaceae	<i>Ottelia ovalifolia</i>		
Iridaceae	<i>Patersonia juncea</i>		
	<i>Patersonia occidentalis</i>	X	
Lamiaceae	<i>Hemiandra pungens</i>		
Lobeliaceae	<i>Lobelia alata</i>		
	<i>Lobelia gibbosa</i>		
Loranthaceae	<i>Nuytsia floribunda</i>	X	
Mimosaceae	<i>Acacia huegellii</i>	X	
	<i>Acacia pulchella</i>	X	X
	<i>Acacia saligna</i>		
	<i>Acacia sessilis</i>		
	<i>Acacia stenoptera</i>	X	X
Myrtaceae	<i>Astartea fascicularis</i>		
	<i>Beaufortia elegans</i>		
	<i>Eucalyptus calophylla</i>	X	X
	<i>Eucalyptus marginata</i>		X
	<i>Hypocalymma angustifolium</i>	X	X
	<i>Kunzea ericifolia</i>	X	X
	<i>Melaleuca incana</i>		
	<i>Melaleuca lateritia</i>		
	<i>Melaleuca preissiana</i>		
	<i>Melaleuca thymoides</i>		

	<i>Melaleuca viminea</i>		
	<i>Pericalymma ellipticum</i>		
	<i>Verticordia densiflora</i> var <i>densiflora</i>		
Orchidaceae	<i>Caladenia flava</i>		
	<i>Prasophyllum parvifolium</i>		X
	<i>Pterostylis vittata</i>		X
	<i>Pyrorchis nigricans</i>		X
Papilionaceae	<i>Aotus gracillima</i>	X	X
	<i>Bossiaea eriocarpa</i>	X	X
	<i>Daviesia decurrens</i>	X	
	<i>Daviesia physodes</i>		
	<i>Gompholobium tomentosum</i>	X	X
	<i>Hardenbergia comptoniana</i>		
	<i>Hovea elliptica</i>		
	<i>Hovea trisperma</i>	X	X
	<i>Jacksonia furcellata</i>		
	<i>Jacksonia lehmannii?</i>		
	<i>Jacksonia stembergiana</i>	X	X
	<i>Jacksonia sericea</i>		
	<i>Kennedia prostrata</i>		
	<i>Viminaria juncea</i>		
Proteaceae	<i>Adenanthos cygnorum</i>		
	<i>Banksia attenuata</i>	X	
	<i>Banksia grandis</i>		
	<i>Banksia ilicifolia</i>		
	<i>Banksia menziesii</i>		
	<i>Conospermum stoechadis</i>		
	<i>Dryandra lindleyana</i>		
	<i>Hakea lissocarpha</i>		
	<i>Hakea ruscifolia</i>	X	
	<i>Hakea varia</i>		
	<i>Petrophile linearis</i>		
	<i>Stirlingia latifolia</i>		
	<i>Synaphea gracillima</i>		
	<i>Synaphea petiolaris</i> subsp <i>petiolaris</i>		
Restionaceae-	<i>Alexgeorgea nitens</i>	X	X
	<i>Desmocladius fascicularis</i>	X	
	<i>Desmocladius flexuosa</i>	X	X
	<i>Hypolaena exsulca</i>		X
	<i>Lepyrodia glauca</i>		
	<i>Lyginia barbata</i>	X	
	<i>Lyginia imberbis</i>		
	<i>Meeboldina decipiens</i> subsp <i>decipiens</i>		
	<i>Meeboldina roycei</i>		
Rubiaceae	<i>Opercularia hispidula</i>		
Rutaceae	<i>Philothea spicata</i>		
Stackhousiaceae	<i>Tripterococcus paniculatus</i>		
Stylidiaceae	<i>Stylidium brunonianum</i>	X	X
	<i>Stylidium</i> sp		
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i> subsp <i>semibarbata</i>		?
	<i>Xanthorrhoea gracilis</i>	X	
	<i>Xanthorrhoea preissii</i>	X	
Zamiaceae	<i>Macrozamia riedlei</i>		

Lindsay Stephens



Melaleuca Woodland. Note the species from sand ridge conditions adjacent to *Melaleuca preissiana*. Photos taken late in the day when raining.



Kunzea ericifolia Thicket, showing reduced ground cover. Photos taken late in day when raining.

Notes by BJ Keigay 25/10/04

Wetland Assessment, Lot 295, Alderson Street Pinjarra

Introduction

25 February 2004

This wetland and vegetation assessment of Lot 295, Alderson Street, Pinjarra was undertaken to assess the potential of the site for a subdivision.

A Subdivision Guide Plan, prepared by Dykstra and Associates, shows the site to be subdivided into 2.0 hectare lots. The subdivision was planned to be able to accept an overlay plan at the local authority request.

The site was previously owned by the Crown and sold to the current owners approximately 2 years ago.

A wetland has been nominated on the site and this report was to determine the significance of the wetland and suggest how the wetland may be able to be fitted into the Subdivision Guide Plan.

Studies of the vegetation were made on 15 July 2003, 20 November 2003 and 6 December 2003 by Lindsay Stephens to assess the vegetation and delineate the wetland, and search for Rare and Priority flora. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003 flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

The lot lies to the west of Pinjarra townsite in an area of proposed urban expansion.

Geomorphology and Hydrology

Lot 295 lies on the eastern side of the Pinjarra Plain. The site is flat with an elevation varying by only a few metres, dropping from east to west.

The soils on site are exposed in a central drain, and are sands in the eastern two thirds, overlying clays of the Guildford Formation. In the western third the Guildford Formation is exposed and this reduces vertical permeability of the soils.

The site is well drained in the eastern and central sandy areas, but has reduced drainage in the west. A drain runs along the northern boundary, diverging into the central north east of the site.

The wetter western area is subjected to shallow ground water in winter with water collecting due to restricted lateral and vertical drainage. At the time of the site inspection surface water had begun to lay on the surface. Following winter, water will evaporate, be transpired, and perhaps slowly infiltrate to the subsoils.

Vegetation

Introduction

Studies of the vegetation were made by Lindsay Stephens.

Lot 295 was extensively walked and the plant species identified. The vegetation studies were completed in winter (15 July 2003) and spring (20 November 2003 and 6 December 2003), with the spring study on 20 November 2003 conducted at a time when the wetland species appeared to be at their peak.

Prior to the spring surveys the CALM and WA Herbarium databases were searched and published references checked to assist field observations. Specimens that showed similarities to those on the CALM and Herbarium databases, and specimens not readily identified, were checked against the WA Herbarium reference collection.

The vegetation is partially disturbed across the site, with the edges subject to exotic and weed species incursions. In other parts the vegetation is in Good to Excellent Condition.

Communities

Five vegetation communities are identifiable. These are not quite typical communities of the Swan Coastal Plain because of their small size and transitional nature.

The vegetation communities are;

- *Banksia* Woodland in the centre and east. This contains scattered patches of *Melaleuca* Woodland.
- *Kunzea ericifolia* Thicket in a small area on the eastern boundary, probably originating from disturbance.
- *Melaleuca* Woodland in scattered patches across the site, and the south western corner.
- *Pericalymma elipticum*, *Hypocalymma angustifolium* Heathland as a transition between the wetter Myrtaceous Shrubland and the *Banksia* Woodland
- Myrtaceous Shrubland along the western boundary in the wetter areas.

Banksia Woodland

This varies across the site with the larger and understorey species changing in their frequency and presence.

The overstorey is dominated by *Banksia attenuata*, *Banksia ilicifolia*, *Allocasuarina fraseriana* *Eucalyptus calophylla* and occasional *Melaleuca preissiana*. Under this are taller shrubs of occasional *Kunzea ericifolia*, *Adenanthos cygnorum*, *Melaleuca thymoides*, *Jacksonia furcellata*, *Philothea spicata*, and occasional *Hakea lissocarpa*.

The understorey contains common species such as *Xanthorrhoea preissii*, *Gompholobium tomentosum*, *Melaleuca incana*, *Bossiaea eriocarpa*, *Phlebocarya ciliata*, *Jacksonia sericea*, *Nuytsa floribunda*, *Daviesia decurrens*, *Verticordia* sp, *Petrophile linearis*, *Stirlingia latifolia* and *Acacia pulchella*.

Ground covers include *Patersonia occidentalis*, *Burchardia* spp, *Acacia pulchella*, *Damperia linearis*, *Dasypogon bromeiliifolius*, and *Conostylis caricina*, *Conostylis aculeata*, *Opercularia hispidula*, *Phyllanthus calycinus*, *Lepidosperma angustatum*, *Drosera erythrorhiza* *Stylidium brunonianum*, *Phlebocarya ciliata*, *Brachyscome pusilla*, *Pterostylis vittata*, *Drosera pallida*, *Patersonia occidentalis*, *Hardenbergia comptoniana*, *Lagenophora huegelii*, *Caladenia* sp *Acacia pulchella* *Acacia sessilis*, *Xanthorrhoea gracilis*, *Hibbertia huegelii*, *Lyginia barbata*, and *Desmocladius fascicularis*,

This community is most like Community Type 21a and is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994, *A Floristic survey of the southern Swan Coastal Plain*, Unpublished Report for the Australian Heritage Commission, prepared by Department of Conservation and Land Management and Conservation Council of Western Australia Incl).

***Kunzea ericifolia* Thicket**

This is dominated by a thicket of *Kunzea ericifolia*, with reduced understorey and some groundcovers. Ground covers in this vegetation are dominated by species from the Banksia Woodland and the lower communities, such as *Phlebocarya ciliata*. Annual species are often present, but in July it was a little early to search for these. The understorey and ground cover of this community is dominated by lower elevation Banksia Woodland and therefore this community is not classified as a wetland.

This community is most like Community Type 21c (Gibson et al, 1994) being lower in the landscape and thus located on moister soils of Bassendean Sands.

***Melaleuca* Woodland**

This consists of gradational species between Banksia Woodland. The dominating vegetation is scattered *Melaleuca preissiana* over shrub and groundcover vegetation of lower elevation Banksia Woodland.

This community is also best listed as a type of Community Type 21c (Gibson et al) being located in small depressions of the sand ridge and thus located on moister soils of Bassendean Sands. *Melaleuca preissiana* is common in Community Type 21c, but on the basis of the ground and understorey species it is not classified as wetland.

***Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland**

Pericalymma elipticum, *Hypocalymma angustifolium* Heathland occurs as a transition between the wetter Myrtaceous Shrubland on the western boundary and *Banksia* and *Melaleuca* Woodland. Both *Pericalymma elipticum* and *Hypocalymma angustifolium* form a dominant feature of the community which also contains species such as *Jacksonia lehmannii*?, *Acacia pulchella*, *Xanthorrhoea preissii*, *Dasypogon bromeiliifolius*, *Burchardia umbellata*, *Hakea varia*, *Hypolaena exsulca*, *Jacksonia sericea*, *Melaleuca incana*, *Acanthocarpus canaliculatus*, *Ottelia ovalifolia*.

This community has elements of Community Types 8, 9 and 10a, Gibson et al, 1994. Gibson et al 1994 list all three Community Types as Well Reserved, Vulnerable.

Myrtaceous Shrubland along the western boundary in the wetter areas.

The Myrtaceous Shrubland occurs along the western boundary where surface waterlogging occurs in winter. Species similar to those in the *Pericalymma elipticum*, *Hypocalymma angustifolium* Heathland, but species more suited to slightly wetter conditions enter the community and others drop out. Some additional species are *Melaleuca viminea*, *Melaleuca lateritia*, *Astartea fascicularis* and *Lepidosperma longitudinale*.

This community forms a transitional community between *Pericalymma elipticum*, *Hypocalymma angustifolium* Heathland and the Banksia Woodland. It is probably best listed as a type of Community Type 21c (Gibson et al) being located on the lower western edge of the sand ridge and thus located on moister soils of Bassendean Sands.

There was evidence of bandicoots in this vegetation community.

Community Significance

The site was assessed by Keighery B, and M Trudgen, 1992, Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain, Department of Conservation and Land Management.

The site was listed as the "Cole Street", Site 39, Pinjarra. Keighery and Trudgen recommended that the site, which included the land to the east, be regarded as a possible conservation area. They also listed the site as being in private ownership.

Department of Conservation and Land Management, 1980, Atlas of Natural Resources , Darling System, Western Australia, list the site as Vegetation Complex 32 Guildford Complex.

EPA Guidance for the Assessment of Environmental Factors, No 10, Levels of assessment for proposal affecting natural areas within the System 6 region and Swan Coastal Plan portion of the System 1 Region (January 2003) lists the Guildford Complex as having only 5% remaining of which 143 hectares is in secure tenure, which represents 0.2% of the pre 1750 extent of vegetation.

Community Type 21a is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994).

Whilst Bush Forever considered only the Perth Metropolitan area, Gibson et al considered the vegetation communities of the Swan Coastal Plain. Community Type 21a extends from Gingin to nearly Busselton, with particular concentration south of Perth (Gibson et al, 1994). The assessment of Community Type 21a as "Well Reserved, Low Risk" is therefore an assessment of the condition of the Community across its whole distribution.

Gibson et al 1994 lists Community Types 8, 9 and 10a as Well Reserved, Vulnerable. These communities occur in scattered locations from just north of Perth to Busselton.

The location of the various plant communities is shown on the aerial photograph Figure 1.

Rare Flora

The CALM and WA Herbarium databases were searched prior to the site inspections in November and December. The species were checked in published references and any similar species collected and checked against the reference collection in the Western Australian Herbarium.

During the site inspection of 20 November 2003 the site was walked along east west transects of 50 metres. The wetland and wetland buffer areas in the west were walked at intervals of 10 - 20 metres to search for Rare or Priority species. Any species not readily identified in the field was collected and then either identified using published texts or cross checked against the Western Australia Herbarium reference collection.

No Declared Rare taxa were identified. However two Priority Taxa were recorded, although it is uncertain whether the taxa recorded as *Jacksonia sericea* is that species.

Jacksonia sericea? occurs on site in the west. The pedicel of the pods was not recurved in the specimens observed and so the taxa may not be *Jacksonia sericea*. *Jacksonia sericea*, a Priority 3 plant, is relatively common in scattered communities, particularly to the north of Perth and extends to Pinjarra. It is not under immediate threat.

Craspaedia argillicola, a Priority 2 species, was observed in the wetter areas of the west, in the area nominated as Myrtaceous shrubland and *Pericalymma - Hypocalymma* Heath. It occurs from Pinjarra to Waterloo.

The western wetland vegetation, Myrtaceous shrubland, is likely to contain other less common species. It is a vegetation type that has predominantly been locally cleared on nearby properties for summer grazing and is recommended for preservation. The *Pericalymma - Hypocalymma* Heath and the south western area of Melaleuca Woodland (MWA on Figure 1) also forms part of that buffer.

Vegetation Condition

The Vegetation Condition Scale, modified from Bush Forever, was used, as shown below.

This Assessment		Bush Forever, 2000 (See Bush Forever, 2000, Volume 2, Table 2, page 48).		Keighery/Connell and Trudgen, (See Bush Forever, 2000, Volume 2, Table 12, page 48).	
1	Excellent	1	Pristine	1	Excellent
2	Very Good	2	Excellent	2	Very Good
3	Good	3	Very Good	3	Good
4	Fair	4	Good	4	Poor
5	Degraded	5	Degraded	5	Very Poor
6	Completely Degraded	6	Completely Degraded	6	Completely Degraded

Approximately half the site is in Excellent to Very Good Condition, including the wetland vegetation along the western edge.

Some degradation occurs around the edges, particularly along the drain in the north eastern corner. Disturbance also occurs through the centre of the site. In general the edge effects are classified as Fair, and this includes a minor area of clearing in the south western corner. Some Degraded vegetation is present in the north eastern corner.

The central part shows evidence of disturbance, with vegetation disturbance caused by minor firewood gathering, partial clearing through activity, and probably some dieback, based on the death of Banksias. This vegetation is rated as being in Fair Condition.

Vegetation Condition is shown on Figure 2.

Species list

The species list below shows the species identified on site during the inspections of 15 July 2003, 20 November 2003 and 6 December 2003 and has been divided into the species found in the wetter areas and those on the sand ridge; Studies by Lindsay Stephens. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003 flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

A total of 111 taxa were identified. These are listed in two columns where they commonly occur.

- Sandridge - Higher and Lower Elevations

The species contained in the *Banksia* Woodland in the centre and east have been combined with the *Kunzea ericifolia* Thicket on the eastern boundary. These communities were searched for Rare and Priority species but individual species were not searched to the same extent as the wetland. That is the species list for the sand ridge is not complete.

Small areas of *Melaleuca* Woodland occur as scattered patches across the sandridge and in the south western corner. It contains elements of both the wetland vegetation and the sand ridge vegetation, but is dominated by the sand ridge vegetation.

- Wetland and Wetland Buffer

Pericalymma ellipticum, *Hypocalymma angustifolium* Heathland is a transition between the wetter Myrtaceous Shrubland and the *Banksia* Woodland. It is included with Myrtaceous Shrubland of the wetter areas.

The small area of *Melaleuca* Woodland in the south west (Mwa) is included in this category because the understorey contains greater wetland species.

Family	Species	Predominantly found on ;	
		Wetland and Wetland Buffer	Sandridge - Higher and Lower Elevations
Amaranthaceae	<i>Ptilotus drummondii</i>	X	X
Anthericeae	<i>Tricoryne elatior</i>	X	X
	<i>Thysanotus patersonii</i>	X	X
Asteraceae	<i>Brachyscome pusilla</i>		X
	<i>Sila humii</i>	X	
	<i>Lagenophora huegelii</i>		X
	<i>Myriocephalus appendiculatus</i>	X	
	<i>Podolepis gracilis</i>	X	
	<i>Vellereophyton dealabatum*</i>	X	
Casuarinaceae	<i>Allocasuarina fraseriana</i>		X
	<i>Allocasuarina humilis</i>		X
Colchicaceae	<i>Burchardia umbellata</i>	X	X
Cyperaceae	<i>Cyathochaeta avenacea</i>	X	
	<i>Ficinia nodosa</i>	X	
	<i>Isolepis</i> sp	X	
	<i>Lepidosperma longitudinale</i>	X	
	<i>Lepidosperma squamatum</i>	X	X
	<i>Mesommelaena tetragona</i>	X	X
Dasyopogonaceae	<i>Acanthocarpus canaliculatus</i>	X	
	<i>Dasyopogon bromeliifolius</i>	X	X
	<i>Lomandra preissii</i>	X	
Dilleniaceae	<i>Hibbertia hypericoides</i>		X

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	<i>Hibbertia huegelii</i>	X	X
	<i>Hibbertia racemosa</i>		X
Droseraceae	<i>Drosera erythrorhiza</i>		X
	<i>Drosera gigantea</i>	X	
	<i>Drosera pallida</i>		X
Epacridaceae	<i>Leucopogon</i> sp		X
Euphorbiaceae	<i>Phyllanthus calycinus</i>		X
Goodeniaceae	<i>Damperia linearis</i>		X
	<i>Lechenaultia expansa</i>	X	
	<i>Lechenaultia floribunda</i>	X	
Haemodoraceae	<i>Anigozanthos manglesii</i>		X
	<i>Anigozanthos viridus</i>	X	
	<i>Conostylis aculeata</i> subsp <i>aculeata</i>		X
	<i>Conostylis caricinia</i>		X
	<i>Haemodorum simplex</i>	X	
	<i>Haemodorum spicatum</i>		X
	<i>Phlebocarya ciliata</i>	X	X
Hydrochritaceae	<i>Ottelia ovalifolia</i>	X	
Iridaceae	<i>Patersonia juncea</i>	X	
	<i>Patersonia occidentalis</i>		X
Lamiaceae	<i>Hemiandra pungens</i>	X	
Lobeliaceae	<i>Lobelia alata</i>	X	X
	<i>Lobelia gibbosa</i>	X	X
Loranthaceae	<i>Nuytsia floribunda</i>		X
Mimosaceae	<i>Acacia huegellii</i>		X
	<i>Acacia pulchella</i>	X	X
	<i>Acacia saligna</i>	X	
	<i>Acacia sessilis</i>		X
Myrtaceae	<i>Astartea fascicularis</i>	X	
	<i>Beaufortia elegans</i>	X	
	<i>Eucalyptus calophylla</i>		X
	<i>Eucalyptus marginata</i>		X
	<i>Hypocalymma angustifolium</i>	X	
	<i>Kunzea ericifolia</i>	X	X
	<i>Melaleuca incana</i>	X	X
	<i>Melaleuca lateritia</i>	X	
	<i>Melaleuca preissiana</i>	X	X
	<i>Melaleuca thymoides</i>		X
	<i>Melaleuca viminea</i>	X	
	<i>Pericalymma elipticum</i>	X	
	<i>Verticordia densiflora</i> var <i>densiflora</i>	X	
Orchidaceae	<i>Caladenia flava</i>		X
	<i>Prasophyllum</i> sp	X	
	<i>Pterostylis vittata</i>		X
	<i>Pyrorchis nigricans</i>		X
Papilionaceae	<i>Aotus gracillima</i>	X	
	<i>Bossiaea eriocarpa</i>		X
	<i>Daviesia decurrens</i>		X
	<i>Daviesia physodes</i>	X	
	<i>Gompholobium tomentosum</i>	X	X
	<i>Hardenbergia comptoniana</i>		X
	<i>Daviesia decurrens</i>	X	
	<i>Hovea elliptica</i>		
	<i>Hovea trisperma</i>	X	
	<i>Jacksonia furcellata</i>	X	X
	<i>Jacksonia lehmannii?</i>	X	X
	<i>Jacksonia stembergiana</i>		X
	<i>Jacksonia sericea</i>	X	
	<i>Viminaria juncea</i>	X	
Proteaceae	<i>Adenanthos cygnorum</i>		X
	<i>Banksia attenuata</i>		X
	<i>Banksia grandis</i>		X
	<i>Banksia ilicifolia</i>		X
	<i>Banksia menziesii</i>		X
	<i>Conospermum stoechadis</i>	X	
	<i>Dryandra lindleyana</i>		X
	<i>Hakea lissocarpha</i>		X

	<i>Hakea varia</i>	X	
	<i>Petrophile linearis</i>		X
	<i>Stirlingia latifolia</i>		X
	<i>Synaphea gracillima</i>	X	
	<i>Synaphea petiolaris</i> subsp <i>petiolaris</i>	X	
Restionaceae-	<i>Alexgeorgea nitens</i>	X	
	<i>Desmocladius fascicularis</i>	X	X
	<i>Desmocladius flexuosa</i>	X	X
	<i>Hypolaena exsulca</i>	X	
	<i>Lepyrodia glauca</i>	X	
	<i>Lyginia barbata</i>		X
	<i>Lyginia imberbis</i>	X	
	<i>Meeboldina decipiens</i> subsp <i>decipiens</i>	X	
	<i>Meeboldina roycei</i>	X	
Rubiaceae	<i>Opercularia hispidula</i>		X
Rutaceae	<i>Philotheca spicata</i>		X
Stackhousiaceae	<i>Tripterococcus paniculatus</i>	X	
Stylidiaceae	<i>Stylidium brunonianum</i>	X	X
	<i>Stylidium</i> sp		X
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i> subsp <i>semibarbata</i>	X	
	<i>Xanthorrhoea gracilis</i>		X
	<i>Xanthorrhoea preissii</i>	X	X
Zamiaceae	<i>Macrozamia riedlei</i>		X

No apparent evidence of dieback occurs on the site.

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Wetlands

The Myrtaceous Shrubland contain wetland species and has sufficient wetland function to be described as a wetland. The soils are generally clays in the north, with sand over clays in the south. Water lays on site for variable amounts of time each winter, particularly in the north.

The *Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland forms a transitional unit between the Banksia Woodland at lower elevation and the Myrtaceous Shrubland. However it has sufficient wetland species such as the dominance of *Pericalymma elipticum* - *Hypocalymma angustifolium* to be classified as a wetland.

Neither the *Kunzea ericifolia* Thicket nor the *Melaleuca* Woodland is classified as a wetland. Ground and shrub cover are dominated by species from lower elevation Banksia Woodland such as *Phlebocarya ciliata*. As understorey and ground cover of these communities are dominated by lower elevation Banksia Woodland/sand ridge species these communities are not classified as wetland. As wetlands are identified on the presence of wetland species, and the understorey and shrub layer are not wetlands species, the exclusion of these species is consistent with wetland mapping.

The exception is the small area of *Melaleuca* Woodland in the south western corner where *Melaleuca preissiana* occur over wetland and low Banksia Woodland groundcovers and shrubs. This area also forms a buffer to the *Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland.

The drainage channel is a constructed channel formed by excavation, predominantly along lot boundaries. It commences just east of the wetland and runs along the northern edge before turning north from the north western corner as shown on the aerial photograph which shows general localities. Figure 4. The drain has locally lowered the water tables in the north of Lot 295 and the north east, and reduced the presence of surface water in those areas. Over time these water balance changes will cause gradual changes in the vegetation communities towards more sand ridge (Banksia Woodland) vegetation.

The location of these Wetlands is shown on the attached aerial photographs, Figure 1

The wetlands from the Walis Geomorphic Wetland Mapping Dataset are provided at the same scale as the aerial photograph for overlay purposes. The Geomorphic Wetland Mapping Dataset extends wider than the wetlands, extending into areas of Banksia Woodland. Compare Figure 1 with Figure 3 and the attached print from Walis Mapping. Ground mapping is therefore regarded as more accurate.

The quality of wetlands is normally assessed using EPA Bulletin 686, A Guide to Wetland Management in the Perth and Near Perth Swan Coastal Plain Area. This categorises wetlands on natural and Human attributes.

The two wetlands present on site are the western *Pericalymma ellipticum* *Hypocalymma angustifolium* Heathland and Myrtaceous Shrubland, which forms one wetland and the drain which forms a disturbed wet area.

The wetlands are shown on the attached aerial photograph as Community Types Myrtaceous Shrubland and *Pericalymma - Hypocalymma* Heath.

Human Attributes

The database of the Department of Indigenous Affairs was searched, and whilst there are archaeological and ethnographic sites in the Pinjarra area none of the Latitude/Longitude values matched those for Lot 259 as taken by GPS. The land is privately owned and was sold to the present owners by the Government. As far as the owners are aware no archaeological or ethnographic sites are known from Lot 295.

It is known that land adjoining to the east has been provided to the local Aboriginal People as the "Aboriginal Association" in Hampton Road to the east.

Question IIIb asks for "registered Aboriginal relics or sacred sites" on the wetland site. As far as is known there are no recorded sites on Lot 295. See attached database from Department of Aboriginal Affairs.

Part I PRESENCE OF RARE SPECIES

No	Item	Western Edge	Drain
I	Rare species	Potentially present. Declared Rare species were noted, but one and possibly two Priority species were recorded	Less likely due to disturbance. No Declared Rare or Priority species were recorded.

Part II NATURAL ATTRIBUTES - seasonal and episodic wetlands

No	Item	Western Edge	Drain
IIbI	Quindalup	No 1	No 1
IIbII	Adjacent wetlands	Limited 3	Yes 0
IIbIII	Habitat Diversity	Yes 3	No 1
IIbIV	Habitat Type	Low thickets, seasonal flooding, adjacent vegetation 3	Adjacent vegetation 1
IIbV	Drainage	No 5	Yes 0
IIbVI	Area of modified wetland	< 10% 5	> 40% 1
IIbVII	Wetland size	< 10ha 1	< 10ha 1
	TOTAL	21	5

Part III HUMAN ATTRIBUTES

No	Item	Western Edge	Drain
IIIi	Aesthetics	Low noise 2	Low noise 2
IIIii	Historic/Arch	Nil 0	Nil 0
IIIiii	Security	Private land 1	Private land 1
IIIiv	Protection Groups	Nil 0	Nil 0
IIIv	Passive Recreation	Nil 0	Nil 0
IIIvi	Active Recreation	Nil 0	Nil 0
IIIvii	Human use	Private 1	Private 1
	TOTAL	4	4
	classification	HIGH CONSERVATION BASED ON POTENTIAL FOR RARE SPECIES	MULTIPLE USE

Part IV SUPPLEMENTARY QUESTIONS

No	Item	Western Edge	Drain
IVi	Species Rarity	Less common vegetation communities and two Priority species are present (Yes)	The vegetation communities associated with the drain are common and not "Threatened" (No)
IVii	Effect on land values	May slightly increase land values (Yes)	Unlikely to affect land values (No)
IViii	Human Use	Private land (No)	Private land (No)
IViv	Private human use values	The owner feels that the wetland is an impediment	The owner feels that the drain is an impediment to subdivision and land usage
	classification	Remains as HIGH CONSERVATION based on the quality of the vegetation communities and species	Remains as MULTIPLE USE

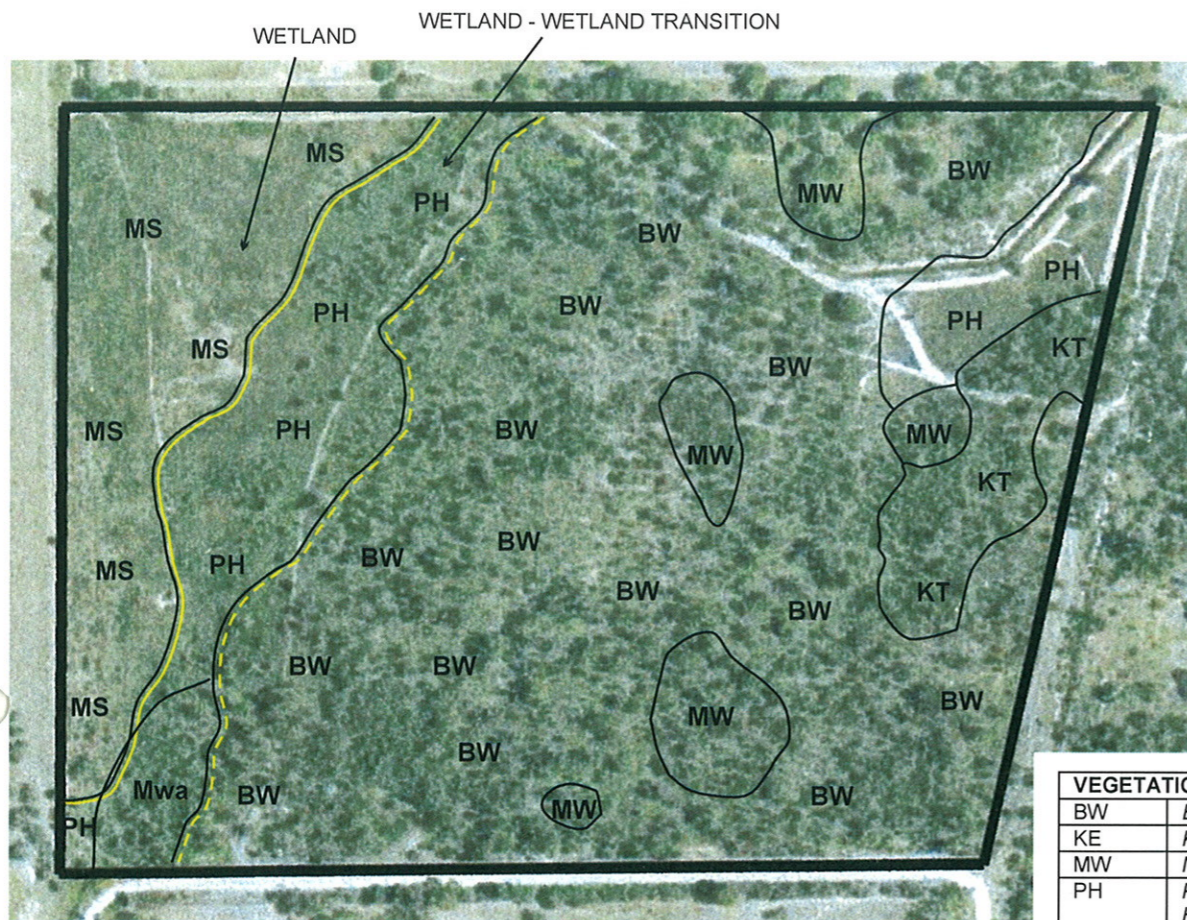
Findings

- The wetland on the western boundary is of High Conservation value because this type of vegetation has predominantly been locally cleared. As such there is potential for the presence of Rare species and there are two Priority species recorded. The vegetation communities of the Guildford Complex are poorly represented and not well preserved in secure reserves.
- The wetland vegetation along the western boundary (*Myrtaceous Shrubland* and *Pericalymma - Hypocalymma* Heath) is in Excellent Condition.
- On the other hand the drainage line along the northern boundary is significantly altered and has limited value. It drains the northern and north eastern areas and has locally lowered water tables and minimised the potential for temporary surface water in winter.
- The drain has potential to be moved, but this needs to be weighed against the potential impact on remnant vegetation.
- Other areas of vegetation on site (*Melaleuca* Woodland and *Kunzea ericifolia* Thicket, with the exception of Mwa on Figure 1) are not classified as wetlands because the understorey and ground cover species are lower elevation sandridge species of Community Type 21c.
- The Geomorphic Wetland Mapping Dataset extends wider than the wetlands, extending into areas of *Banksia* Woodland. Ground mapping is therefore regarded as more accurate.

- Central parts of the site have vegetation in only Fair Condition, possibly due to dieback and weed incursion
- Weeds are spreading from the north east corner and as edge effects along the roadside and firebreaks.
- The sandridge vegetation, which is dominated by Banksia Woodland, it is in generally Good condition, varying from Fair to Good - Excellent.
- Lot 295 was sold by the Government two years ago for subdivision. Therefore flora studies conducted prior to the sale by Government would have classified the significance of the vegetation at the time of sale. As the land was sold it can be concluded that the site was not required for conservation purposes.

Recommendations

1. The vegetation along the western edge of Lot 295 (Myrtaceous Shrubland) is classified as a wetland of High Conservation value. It should be protected, and provided with clearing restrictions, restrictions on fire breaks and possibly conservation covenant.
2. The location of this vegetation, at the rear of lots in that part of the proposed subdivision, makes this level of protection suitable. If the area is further subdivided to urban, as identified by the Shire of Murray, the wetland may have to be excluded, although decisions on this will be delayed pending further assessment at that time.
3. The *Pericalymma* - *Hypocalymma* Heath and Mwa on Figure 1, form a transitional unit between the Myrtaceous Shrubland and Banksia Woodland. Where possible impacts on this vegetation should be minimised.
4. Other vegetation on Lot 295 is variable Condition, but it is recommended that where possible the better vegetation be protected by strategic location of building envelopes in the vegetation of lower condition. This could require clustering and restrictions on clearing.



VEGETATION COMMUNITIES	
BW	<i>Banksia</i> Woodland
KE	<i>Kunzea ericifolia</i> Thicket
MW	<i>Melaleuca</i> Woodland
PH	<i>Pericalymma-Hypocalymma</i> Heath
MS	Myrtaceous Shrubland

FIGURE 1

VEGETATION ASSESSMENT - LOT 259, ALDERSON ROAD, PINJARRA

100 metres



February 2004



VEGETATION CONDITION	
E	Excellent <i>Wishone</i>
VG	Very Good <i>Excellent</i>
G	Good <i>Very Good</i>
F	Fair <i>Good</i>
D	Degraded
CD	Completely Degraded

FIGURE 2



Scale 1 : 12 500 approx

FIGURE 3

Wetland Assessment, Lot 295 Alderson Street Pinjarra

The wetlands from the Walis Geomorphic Wetland Mapping Dataset are provided at the same scale as the aerial photograph for overlay purposes. The Geomorphic Wetland Mapping Dataset extend wider than the wetlands, extending into areas of Banksia Woodland. Compare with Figure 1.

Compare to the attached print from Walis Mapping.



Lindsay Stephens
 BSc - Geology, Msc - Botany
 Mem Aust Geomechanics Society
 Mem WA Env Cons Assoc
LANDFORM RESEARCH
 Quairns - Land Systems
 08 9397 5145



Myrtaceous Shrub Wetland in the north with regrowth following fire



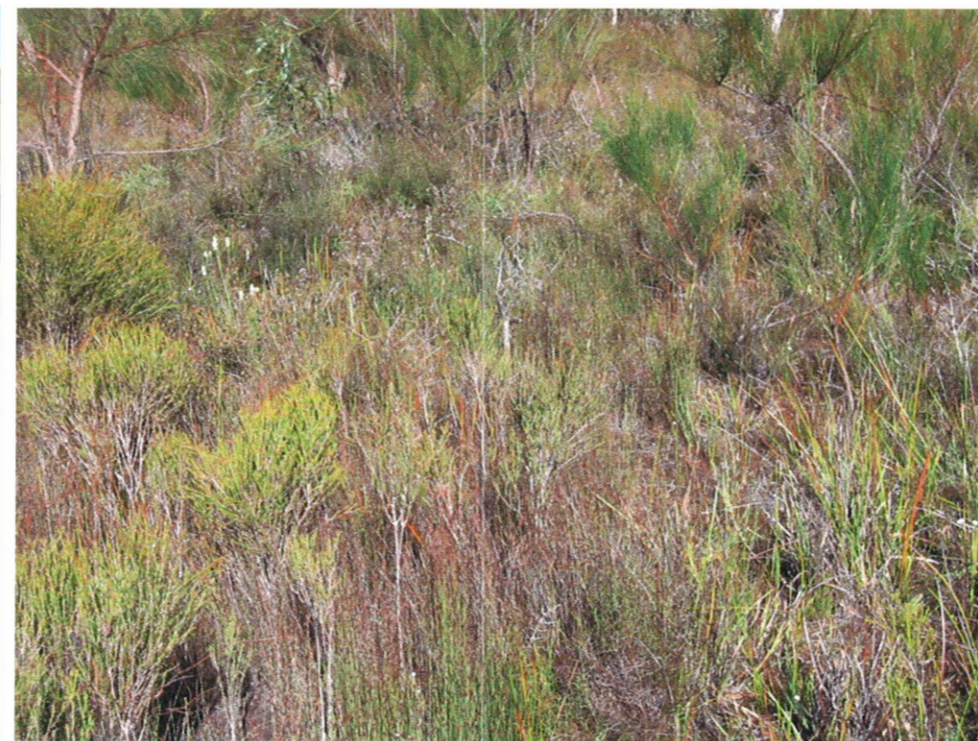
Myrtaceous Shrubland looking towards *Melaleuca preissiana* in the buffer zone



View of the transition zone between the wetland and Banksia Woodland in the background



Myrtaceous Shrubland - wetland in the south western corner with common *Melaleuca incana*



Myrtaceous Shrubland - wetland with common *Viminaria juncea*

Your Ref:
Our Ref: 2001F001173VO12
Enquires: Melanie Harding
Phone: (08) 9334 0431
Fax: (08) 9334 0278
Email: melanieh@calm.wa.gov.au

Landform Research
25 Heather Road
ROLEYSTONE WA 6111

Attention: Lindsay Stephens

Dear Lindsay

REQUEST FOR RARE FLORA INFORMATION

I refer to your request of 7 November 2003 for information on rare flora in the Pinjarra area. The search co-ordinates used were 32° 25' - 32° 41' S and 115° 49' - 115° 55' E.

A search was undertaken for this area of (1) the Department's *Threatened (Declared Rare) Flora* database (for results, if any, see "Summary of Threatened Flora Data" – coordinates are GDA94), (2) the *Western Australian Herbarium Specimen* database for priority species opportunistically collected in the area of interest (for results, if any, see "WAHERB Specimen Database General Enquiry" – coordinates are AGD84) and (3), the Department's *Declared Rare and Priority Flora List* [this list, which may also be used as a species target list, contains species that are declared rare (Conservation Code R or X for those presumed to be extinct), poorly known (Conservation Codes 1, 2 or 3), or require monitoring (Conservation Code 4) – for results, if any, see "Declared Rare and Priority Flora List"].

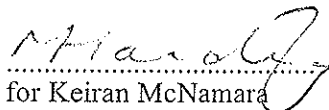
Attached also are the conditions under which this information has been supplied. Your attention is specifically drawn to the seventh point that refers to the requirement to undertake field investigations for the accurate determination of rare flora occurrence at a site. *The information supplied should be regarded as an indication only of the rare flora that may be present and may be used as a target list in any surveys undertaken.*

An invoice for \$200 (plus GST) to supply this information will be forwarded.

It would be appreciated if any populations of rare flora encountered by you in the area could be reported to this Department to ensure their ongoing management.

If you require any further details, or wish to discuss rare flora management, please contact my Principal Botanist, Dr Ken Atkins, on (08) 9334 0425.

Yours faithfully


for Keiran McNamara
EXECUTIVE DIRECTOR

10 November, 2003

Attached

ATTACHMENT

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

RARE FLORA INFORMATION

CONDITIONS IN RESPECT OF SUPPLY OF INFORMATION

1. All requests for data to be made in writing to the Executive Director, Department of Conservation and Land Management, Attention: Administrative Officer Flora, Wildlife Branch.
2. The data supplied may not be supplied to other organisations, nor be used for any purpose other than for the project for which they have been provided, without the prior written consent of the Executive Director, Department of Conservation and Land Management.
3. Specific locality information for Declared Rare Flora is regarded as confidential, and should be treated as such by receiving organisations. Specific locality information for DRF may not be used in public reports without the written permission of the Executive Director, Department of Conservation and Land Management. Publicly available reports may only show generalised locations or, where necessary, show specific locations without identifying species. The Department is to be contacted for guidance on the presentation of rare flora information.
4. Note that the Department of Conservation and Land Management respects the privacy of private landowners who may have rare flora on their property. Rare flora locations identified in the data as being on private property should be treated in confidence, and contact with property owners made through the Department of Conservation and Land Management.
5. Receiving organisations should note that while every effort has been made to prevent errors and omissions in the data provided, they may be present. The Department of Conservation and Land Management accepts no responsibility for this.
6. Receiving organisations must also recognise that the database is subject to continual updating and amendment, and such considerations should be taken into account by the user.
7. It should be noted that the supplied data do not necessarily represent a comprehensive listing of the rare flora of the area in question. Its comprehensiveness is dependant on the amount of survey carried out within the specified area. The receiving organisation should employ a botanist, if required, to undertake a survey of the area under consideration.
8. Acknowledgment of the Department of Conservation and Land Management as source of the data is to be made in any published material. Copies of all such publications are to be forwarded to the Department of Conservation and Land Management, Attention: Principal Botanist, Wildlife Branch.

THE DEPARTMENT OF CONSERVATION AND LAND
MANAGEMENT

DECLARED RARE AND PRIORITY FLORA LIST

for Western Australia

CONSERVATION CODES

R: Declared Rare Flora - Extant Taxa

Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such.

X: Declared Rare Flora - Presumed Extinct Taxa

Taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such.

1: Priority One - Poorly known Taxa

Taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

2: Priority Two - Poorly Known Taxa

Taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

3: Priority Three - Poorly Known Taxa

Taxa which are known from several populations, and the taxa are not believed to be under immediate threat (i.e. not currently endangered), either due to the number of known populations (generally >5), or known populations being large, and either widespread or protected. Such taxa are under consideration for declaration as 'rare flora' but are in need of further survey.

4: Priority Four - Rare Taxa

Taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5-10 years.

ABBREVIATIONS USED IN THREATENED FLORA DATABASE PRINTOUTS

VESTING

AGR Chief Exec Dept of Agriculture
 ALT Aboriginal Land Trust
 BAP Baptist Union of WA Inc
 BSA Boy Scouts Association
 CC Conservation Commission -NPNCA
 CGT Crown Grant in Trust
 COM Commonwealth of Australia
 CRO Crown Freehold-Govt Ownership
 DOL Dept of Land Administration
 DPU Ministry for Planning
 EXD Exec Direc CALM
 FRE Freehold
 HOW Homeswest
 ILD Industrial Lands Develop. Auth
 JOI Joint Vesting-NPNCA & Shire
 LAC LandCorp
 LFC Lands and Forests Commission
 MAG Minister for Agriculture
 MED Ministry of Education
 MHE Minister for Health
 MIN Minister for Mines
 MPL Ministry for Planning
 MPR Minister for Prisons
 MRD Main Roads WA
 MTR Minister for Transport
 MWA Minister for Water Resources
 MWO Minister for Works
 NAT Natural Trust of Australia WA
 NON Not Vested
 NPN NPNCA
 OTH Other
 PRI Private
 RAI Westrail
 SEC Western Power
 SHI Shire
 SPC State Planning Commission
 TEL Telstra
 TGR Timber Govt Requirement
 TOW TOWN
 UNK Unknown
 WAT Water Corporation
 WEL Minister Community Welfare
 WRC Water & Rivers Commission
 XPL Ex-Pastoral Lease

PURPOSES

ABR Aboriginal Reserve
 AER Aerodrome
 CAM Camping
 CAR Caravan park
 CEM Cemetery
 CFA Conservation of Fauna
 CFF Conservation Of Flora & Fauna
 CFL Conservation of Flora
 CHU Church
 CPK Car Park
 COM Common
 CON Conservation Park
 DEF Defence
 DRA Drain
 EDE Educational Endowment

EDU Educational purposes UWA
 ENE Enjoyment of Natural Environ.
 EXC Excepted from sale
 EXL Exploration Lease
 EXP Experimental Farm
 FIR Firing Range
 FOR State Forest
 GHA Grain Handling
 GOL Golf
 GRA Gravel Pit
 GRE Green Belt
 GVT Government Requirements
 HAR Harbour Purposes
 HEP Heritage Purposes
 HER Heritage trail
 HOS Hospital
 KEN Kennels
 MIN Mining lease
 MUN Municipal Purposes
 NPK National Park
 NRE Nature Reserve
 OTH Other
 PAC Public access
 PAR Parkland (& Recreation)
 PAS Pastoral lease
 PFL Protection of Flora
 PIC Picnic ground
 PLA Plantation
 POS Public Open Space
 PPA Public parkland
 PRS Prison site
 PUT Public Utility
 QUA Quarry
 RAD Radio Station
 RAC Racecourse
 REC Recreation
 REH Rehabilitation
 RNP Re-establish Native Plants
 RRE Railway Reserve
 RUB Rubbish
 SAN Sand
 SCH School-site
 SET Settlers requirements
 SHI Shire Requirements
 SHO Showgrounds
 SNN Sanitary
 STO Stopping place
 TIM Timber
 TOU Tourism
 TOW Town-site
 TRA Training Ground
 TRI Trig station
 TVT Television transmitting
 UNK Unknown
 UTI Utilities
 VCL Vacant Crown Land
 VER Road Verge
 VPF Vermin Proof Fence
 WAT Water
 WCO Water & Conservation of F & F
 WOO Firewood

Summary of Threatened Flora Data

Taxon Name	Cons.	Pop ID	Latitude	Longitude	Purpose	Vesting
-----	----	-----	-----	-----	-----	-----
Aponogeton hexatepalus	4	20	32^38'14.6"	115^51'45.4"		PRI
Centrolepis caespitosa	R	5	32^37'10.6"	115^51'03.4"	REC	SHI
Cyathochaeta teretifolia	3	2	32^35'06.6"	115^50'41.4"		PRI
Diuris drummondii	R	6	32^37'24.6"	115^51'51.4"	EDE	CGT
Diuris purdiei	R	7	32^36'55.6"	115^51'18.4"	CFF	CC
Diuris purdiei	R	8	32^37'25.6"	115^51'53.4"	EDE	CGT
Drosera occidentalis subsp. occidentalis	4	6	32^36'05.6"	115^50'05.4"	OTH	MRD
Drosera occidentalis subsp. occidentalis	4	18A	32^37'20.6"	115^50'52.4"	REC	SHI
Drosera occidentalis subsp. occidentalis	4	18B	32^37'20.6"	115^50'45.4"	REC	SHI
Microtis media subsp. quadrata	4	1	32^36'55.6"	115^51'20.4"	CFF	CC
Myriophyllum echinatum	3	9	32^38'06.6"	115^51'50.4"		DOL
Parsonsia diaphanophleba	4	2	32^35'30.6"	115^50'44.4"	REC	SHI
Rhodanthe pyrethrum	3	11	32^37'10.6"	115^51'03.4"	REC	SHI
Rhodanthe pyrethrum	3	12	32^38'06.6"	115^51'50.4"		DOL
Stylidium longitubum	3	5	32^37'10.6"	115^51'03.4"	REC	SHI
Stylidium longitubum	3	6	32^38'06.6"	115^51'50.4"		DOL
Synaphea sp.Pinjarra(R.Davis 6578) pn	R	2	32^37'16.8"	115^50'57.5"	OTH	SHI
Synaphea stenoloba	R	1A	32^36'49.6"	115^53'42.4"	VER	MRD
Synaphea stenoloba	R	1B	32^36'49.6"	115^53'41.4"		PRI
Synaphea stenoloba	R	1C	32^36'53.6"	115^54'19.4"		PRI
Synaphea stenoloba	R	1D	32^36'48.6"	115^54'10.4"		PRI
Synaphea stenoloba	R	3A	32^39'44.6"	115^54'37.4"	RRE	RAI
Synaphea stenoloba	R	3B	32^39'37.6"	115^54'37.4"	RRE	RAI
Tripterococcus paniculatus ms	1	10	32^37'14.6"	115^51'00.4"	REC	SHI
Villarsia submersa	4	17	32^38'14.6"	115^51'45.4"		PRI

Aponogeton hexatepalus
 H.Bruggen (Aponogetonaceae)
 CONSERVATION STATUS:P4
 Coll.: J.L. Robson s.n. Date: 10 11 1993 (PERTH 04165756)
 LOCALITY "Aboriginal Bindjareb Park" - is located 100 m S along fenceline from the NW corner of this property and then 95 m at 135 degrees down scrub rolled access fireline to population on both sides
 WA
 LAT 32 Deg 38 Min 19.000 Sec S LONG 115 Deg 51 Min 40.000 Sec E
 Flat. Swamp. Moist brown/grey clay/sand. Completely open almost treeless swamp with odd stunted Paperbark. Associated with *Hakea varia*, *Leptocarpus* sp., *Calothamnus lateralis*, *Pericalymma*

Caladenia huegelii
 Rchb.f. (Orchidaceae)
 CONSERVATION STATUS:R
 Coll.: State School s.n. Date: 09 1925 (PERTH 327492)
 LOCALITY Pinjarra WA
 LAT 32 Deg 37 Min 36.000 Sec S LONG 115 Deg 52 Min 0.000 Sec E
 Previous det.: *Caladenia pectinata* R. Rogers

Caladenia huegelii
 Rchb.f. (Orchidaceae)
 CONSERVATION STATUS:R
 Coll.: C.A. Gardner 890 Date: 16 10 1920 (PERTH 870374)
 LOCALITY Ravenswood WA
 LAT 32 Deg 35 Min 0.000 Sec S LONG 115 Deg 49 Min 0.000 Sec E
 Previous det.: *Caladenia longicauda* Lindley

Caladenia speciosa
 Hopper & A.P.Br. (Orchidaceae)
 CONSERVATION STATUS:P4
 Coll.: R. Helms s.n. Date: 09 10 1897 (PERTH 00289957)
 LOCALITY Pinjarra, Murray River WA
 LAT 32 Deg 38 Min 0.000 Sec S LONG 115 Deg 52 Min 0.000 Sec E
 Previous det.: *Caladenia speciosa* Hopper & A.P.Brown

Centrolepis caespitosa
 D.A.Cooke (Centrolepidaceae)
 CONSERVATION STATUS:R
 Coll.: B.J. Keighery 2402 Date: 17 11 1995 (PERTH 06427766)
 LOCALITY SW corner Phillips and Moores Roads, W Pinjarra S of Pinjarra Road,

Shire of Murray, in to System 6 Update quadrat pind02 WA
 LAT 32 Deg 37 Min 19.596 Sec S LONG 115 Deg 50 Min 52.836 Sec E
 Annual sedge, one third of plant embedded in mud. Wet Flat, brown clay, poor drainage, wet during winter/spring.
 Associated species: *Melaleuca viminea*.

Cyathochaeta teretifolia
 W.Fitzg. (Cyperaceae)
 CONSERVATION STATUS:P3
 Coll.: B.J. Keighery 2296 Date: 18 12 1995 (PERTH 06511872)
 LOCALITY System 6 Update quadrat raven 02. Subm 280 Ravenswood Speedway WA
 LAT 32 Deg 35 Min 17.052 Sec S LONG 115 Deg 50 Min 29.652 Sec E
 Tufted perennial herb to 1.5 m. Seasonal Wetland; flat, black sandy peat over ?sand. Poor drainage, wet during winter/spring. Associated species: *Melaleuca preissiana*, *Melaleuca raphiophylla*, *Eucalyptus rudis*.

Dillwynia dillwynioides
 (Meisn.)Druce (Papilionaceae)
 CONSERVATION STATUS:P3
 Coll.: A. Morrison s.n. Date: 30 09 1901 (PERTH 720844)
 LOCALITY Pinjarra, Murray River WA
 LAT 32 Deg 38 Min 0.000 Sec S LONG 115 Deg 52 Min 0.000 Sec E
 Previous det.: *Dillwynia preissii* Benth.

Dodonaea hackettiana
 W.Fitzg. (Sapindaceae)
 CONSERVATION STATUS:P4
 Coll.: B.J. Keighery 2232 Date: 31 08 1995 (PERTH 06513085)
 LOCALITY Spit in the Murray River, S of the Ravenswood Drag Strip. Old Mandurah Road, Ravenswood WA
 LAT 32 Deg 35 Min 0.000 Sec S LONG 115 Deg 50 Min 0.000 Sec E
 Erect shrub: height 2 m and width 1 m. Riverbank, brown loam. *Eucalyptus rudis* Forest over mixed Thicket. Frequency:scattered.

Drakaea elastica
 Lindl. (Orchidaceae)
 CONSERVATION STATUS:R
 Coll.: Col. B.T. Goadby s.n. Date: 10 1926 (PERTH 231207)
 LOCALITY Pinjarra WA
 LAT 32 Deg 37 Min 36.000 Sec S LONG 115 Deg 52 Min 0.000 Sec E

Previous det.: *Drakaea jeanensis* R. Rogers

Drakaea elastica
Lindl. (Orchidaceae)
CONSERVATION STATUS:R
Coll.: C.A. Gardner 883 Date: 16 10 1920 (PERTH 231223)
LOCALITY Ravenswood WA
LAT 32 Deg 35 Min 0.000 Sec S LONG
115 Deg 49 Min 0.000 Sec E
Previous det.: *Drakaea jeanensis* R. Rogers

Drakaea elastica
Lindl. (Orchidaceae)
CONSERVATION STATUS:R
Coll.: O.H. Sargent s.n. Date: 16 10 1920 (PERTH 231215)
LOCALITY Pinjarra WA
LAT 32 Deg 37 Min 36.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
Labellum crimson. Leaf pale green, shining above, white below. In sand. Between *Banksia* sp.
Previous det.: *Drakaea jeanensis* R. Rogers

Drakaea elastica
Lindl. (Orchidaceae)
CONSERVATION STATUS:R
Coll.: Col. B.T. Goadby s.n. Date: 10 1926 (PERTH 271047)
LOCALITY Pinjarra WA
LAT 32 Deg 37 Min 36.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
Previous det.: *Drakaea jeanensis** R. Rogers

Drakaea elastica
Lindl. (Orchidaceae)
CONSERVATION STATUS:R
Coll.: C.A. Gardner 883 Date: 16 10 1920 (PERTH 231231)
LOCALITY Ravenswood, near Pinjarra WA
LAT 32 Deg 35 Min 0.000 Sec S LONG
115 Deg 49 Min 0.000 Sec E
Previous det.: *Drakaea jeanensis* R. Rogers

Drakaea elastica
Lindl. (Orchidaceae)
CONSERVATION STATUS:R
Coll.: Col. B.T. Goadby s.n. Date: 10 1926 (PERTH 230839)
LOCALITY Pinjarra WA
LAT 32 Deg 37 Min 36.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
On wet sandy flats.
Previous det.: *Drakaea jeanensis* R. Rogers

Drakaea micrantha
Hopper & A.P.Br. ms (Orchidaceae)
CONSERVATION STATUS:R

Coll.: R. Peakall 0072 Date: 10 10 1985 (PERTH 560502)
LOCALITY Private Reserve, Goodale Nature Reserve, Pinjarra WA
LAT 32 Deg 37 Min 36.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
In white-grey sand. In *Banksia* woodland over shrubs over heath, also *Drakaea glyptodon*.
Abundance: only one plant.
Frequency: only one plant.

Eucalyptus rudis
Endl. subsp. *cratyantha* Brooker & Hopper (Myrtaceae)
CONSERVATION STATUS:P4
Coll.: M.I.H. Brooker 6333 Date: 13 08 1979 (PERTH 1505548)
LOCALITY Murray River flats between Pinjarra and Mandurah WA
LAT 32 Deg 35 Min 0.000 Sec S LONG
115 Deg 50 Min 0.000 Sec E
Bark thin, grey, shortly fibrous, with shallow longitudinal fissures, thicker and sometimes tessellated with age.
With *E. calophylla* and *Melaleuca preissiana*.
Previous det.: *Eucalyptus rudis* subsp. *cratyantha* Brooker & S.D. Hopper

Grevillea manglesii
(Graham)McGill. subsp. *ornithopoda* (Meisn.)McGill. (Proteaceae)
CONSERVATION STATUS:P2
Coll.: R. Helms s.n. Date: 23 09 1897 (PERTH 1070134)
LOCALITY Murray River, Pinjarra WA
LAT 32 Deg 38 Min 0.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
Previous det.: *Grevillea glabrata* subsp. *ornithopoda* (Meissner) D. McGillivray

Grevillea manglesii
(Graham)McGill. subsp. *ornithopoda* (Meisn.)McGill. (Proteaceae)
CONSERVATION STATUS:P2
Coll.: R. Helms s.n. Date: 23 09 1897 (PERTH 1070142)
LOCALITY Murray River, Pinjarra WA
LAT 32 Deg 38 Min 0.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
Previous det.: *Grevillea glabrata* subsp. *ornithopoda* (Meissner) D. McGillivray

Grevillea manglesii
(Graham)McGill. subsp. *ornithopoda* (Meisn.)McGill. (Proteaceae)
CONSERVATION STATUS:P2
Coll.: R. Helms s.n. Date: 23 09 1897 (PERTH 1070584)

LOCALITY Murray River, Pinjarra WA
LAT 32 Deg 38 Min 0.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
Previous det.: *Grevillea glabrata* subsp.
ornithopoda (Meissner) D. McGillivray

Grevillea manglesii
(Graham)McGill. subsp. *ornithopoda*
(Meisn.)McGill. (Proteaceae)
CONSERVATION STATUS:P2
Coll.: A. Morrison s.n. Date: 30 09 1901 (
PERTH 1070169)

LOCALITY Murray River, Pinjarra WA
LAT 32 Deg 38 Min 0.000 Sec S LONG
115 Deg 52 Min 0.000 Sec E
Previous det.: *Grevillea glabrata* subsp.
ornithopoda (Meissner) D. McGillivray

Microtis media
subsp. *quadrata* R.J.Bates (Orchidaceae)
CONSERVATION STATUS:P4
Coll.: P. Foreman & J. Kelly PJ 193 Date: 08
10 2002 (PERTH 06323057)
LOCALITY Pinjarra Industrial area WA
LAT 32 Deg 37 Min 13.400 Sec S LONG
115 Deg 51 Min 1.100 Sec E
Perennial herb to 40 cm. Single leaf.
Inflorescence a spike. Flowers light green.
Seasonal wetland. Damp grey clayey sand.
Open shrubland. *Melaleuca raphiophylla*,
Pericalymma ellipticum, *Xanthorrhoea*
preissii, *Hakea ceratophylla*, *Daviesia*
incrassata.
Frequency:few.

Myriophyllum echinatum
Orchard (Haloragaceae)
CONSERVATION STATUS:P3
Coll.: B.J. Keighery 2172 Date: 17 11 1995 (
PERTH 06427413)
LOCALITY Lot 350 and adjacent bushland
Hampton Road, Pinjarra, in System 6 Update
quadrat hamp04 WA
LAT 32 Deg 38 Min 15.828 Sec S LONG
115 Deg 51 Min 40.320 Sec E
Annual. Seasonal Wetland, flat, clay,
poor drainage, wet during winter/spring.
Associated species: *Hakea varia*.

Parsonsia diaphanophleba
F.Muell. (Apocynaceae)
CONSERVATION STATUS:P4
Coll.: B.J. Keighery 2226 Date: 31 08 1995 (
PERTH 06513042)
LOCALITY Spit in the Murray River, S of the
Ravenswood Drag Strip. Old Mandurah Road,
Ravenswood WA
LAT 32 Deg 35 Min 0.000 Sec S LONG
115 Deg 50 Min 0.000 Sec E

Creeper. River spit, brown loam.
Eucalyptus rudis Forest over mixed Thicket.
Frequency:scattered, plants inconspicuous as
they festoon higher branches of
Eucalyptus rudis trees.

Rhodanthe pyrethrum
(Steetz)Paul G.Wilson (Asteraceae)
CONSERVATION STATUS:P3
Coll.: B.J. Keighery 2180 Date: 17 11 1995 (
PERTH 06427499)
LOCALITY Lot 350 and adjacent bushland
Hampton Road, Pinjarra, in System 6 Update
quadrat hamp04 WA
LAT 32 Deg 38 Min 15.828 Sec S LONG
115 Deg 51 Min 40.320 Sec E
Flowers white. Seasonal Wetland, flat,
clay, poor drainage, wet during winter/spring.
Associated species: *Hakea varia*.

Schoenus benthamii
F.Muell. (Cyperaceae)
CONSERVATION STATUS:P3
Coll.: P. Foreman & J. Kelly PJ 205 Date: 24
10 2002 (PERTH 06388442)
LOCALITY Pinjarra Industrial Area WA
LAT 32 Deg 37 Min 13.400 Sec S LONG
115 Deg 51 Min 1.100 Sec E
Tufted rush 15 cm high. Spikelets terminal. 2
involucral bracts present.
Seasonal wetland. Damp, grey clayey sand.
Open shrubland. *Melaleuca raphiophylla*,
Pericalymma ellipticum, *Xanthorrhoea*
preissii, *Hakea ceratophylla*, *Daviesia*
incrassata.
Frequency:few.

Stylidium longitubum
Benth. (Stylidiaceae)
CONSERVATION STATUS:P3
Coll.: B.J. Keighery 2181 Date: 17 11 1995 (
PERTH 06427502)
LOCALITY Lot 350 and adjacent bushland
Hampton Road, Pinjarra, in System 6 Update
quadrat hamp04 WA
LAT 32 Deg 38 Min 15.828 Sec S LONG
115 Deg 51 Min 40.320 Sec E
Flowers purple. Seasonal Wetland, flat,
clay, poor drainage, wet during winter/spring.
Associated species: *Hakea varia*.

Stylidium longitubum
Benth. (Stylidiaceae)
CONSERVATION STATUS:P3
Coll.: P. Foreman & J. Kelly PJ 232 Date: 21
11 2002 (PERTH 06388450)
LOCALITY Pinjarra Industrial Area WA
LAT 32 Deg 37 Min 13.400 Sec S LONG
115 Deg 51 Min 1.100 Sec E

Annual herb 10 cm high. Flowers bright pink.
Seasonal wetland. Damp, grey clayey sand.
Open shrubland. *Melaleuca raphiophylla*,
Pericalymma ellipticum, *Xanthorrhoea*
preissii, *Hakea ceratophylla*, *Daviesia*
incrassata.
Frequency:very common.

Stylidium longitubum
Benth. (Stylidiaceae)
CONSERVATION STATUS:P3
Coll.: P. Foreman & J. Kelly PJ 200 Date: 24
10 2002 (PERTH 06388469)
LOCALITY Pinjarra Industrial Area WA
LAT 32 Deg 37 Min 13.400 Sec S LONG
115 Deg 51 Min 1.100 Sec E
Perennial herb 10 cm high. Leaves occasional
ons tem. Flowers in panicle - pink.
Seasonal wetland. Damp, grey clayey sand.
Open shrubland. *Melaleuca raphiophylla*,
Pericalymma ellipticum, *Xanthorrhoea*
preissii, *Hakea ceratophylla*, *Daviesia*
incrassata.
Frequency:common.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: A.S. George 17062 Date: 12 10 1993 (PERTH 04122224)
LOCALITY Near entrance to Alcoa Refinery
from South Western Highway, NE of Pinjarra
WA
LAT 32 Deg 37 Min 0.000 Sec S LONG
115 Deg 54 Min 0.000 Sec E
Small clumped shrub; stems pale brown;
flowers yellow. no scent. In sandy loam,
at E side of winter-damp flat.
Previous det.: *Synaphea* sp.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: A.S. George 17063 Date: 12 10 1993 (PERTH 04122232)
LOCALITY Near entrance to Alcoa Refinery
from South Western Highway, NE of Pinjarra
WA
LAT 32 Deg 37 Min 0.000 Sec S LONG
115 Deg 54 Min 0.000 Sec E
On winter-wet sandy flats.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: J. Koch & D. Papenfus DP 741 Date: 08
12 1997 (PERTH 04910583)
LOCALITY Ca 4 km SE along Oakley Road
from Pinjarra-Williams Road on (Hotham
Valley) Railway Reserve WA

LAT 32 Deg 39 Min 39.000 Sec S LONG
115 Deg 54 Min 24.000 Sec E
Shrub, mostly finished flowering. Plain.
Dry grey sand.
Low Open Woodland with Marri, *Banksia*
grandis, *B. attenuata*, *Xanthorrhoea*.
Abundance: scattered. Growing with another
broad leafed *Synaphea*. Very weedy areas.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: A.S. George 17061 Date: 12 10 1993 (PERTH 04355946)
LOCALITY Near entrance to Alcoa Refinery
from South Western Highway, NE of Pinjarra
WA
LAT 32 Deg 37 Min 0.000 Sec S LONG
115 Deg 54 Min 0.000 Sec E
Caespitose small shrub, flowers bright yellow.
On winter damp sandy flat.
Mixed collection.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: R. Davis 6579 Date: 22 09 1998 (PERTH 05297257)
LOCALITY 12.5 km S of Dandalup, entrance
to Alcoa Pinjarra, WA
LAT 32 Deg 36 Min 47.000 Sec S LONG
115 Deg 53 Min 45.000 Sec E
Erect compact shrub, 60 cm high x 40 cm
wide. Flowers yellow. Growth phase: active.
Brown sandy clay. Swamp.
Pericalymma.
Previous det.: *Synaphea stenoloba* A.S.George
Frequency:occasional.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: R. Davis 7040 Date: 08 10 1998 (PERTH 05297265)
LOCALITY 3 km SE of Pinjarra, WA
LAT 32 Deg 39 Min 49.000 Sec S LONG
115 Deg 54 Min 32.000 Sec E
Compact shrub, 50 cm high x 50 cm wide.
Flowers yellow. Growth phase: active.
Grey loam. Floodplain.
80% of population flowering.
Previous det.: *Synaphea stenoloba* A.S.George
Frequency:occasional.

Synaphea stenoloba
A.S.George (Proteaceae)
CONSERVATION STATUS:R
Coll.: A.S. George 16990 Date: 03 08 1993 (PERTH 04276868)

LOCALITY Near turnoff to Alcoa Refinery from South Western Highway, NE of Pinjarra WA

LAT 32 Deg 37 Min 0.000 Sec S LONG 115 Deg 54 Min 0.000 Sec E

Caespitose shrub c. 45 cm tall, 70 cm wide, in young bud. In shallow depression, in sandy loam.

With thick shrub-sedge association including *Regelia*, *Hakea sulcata*, *Stirlingia*, *Lepidosperma*, *Leptospermum* and occasional *Marri*.

Synaphea stenoloba

A.S.George (Proteaceae)

CONSERVATION STATUS:R

TYPE STATUS: ISO

Coll.: A.S. George 17060 Date: 12 10 1993 (PERTH 04202090)

LOCALITY Near entrance to Alcoa Refinery from South Western Highway, NE of Pinjarra WA

LAT 32 Deg 37 Min 0.000 Sec S LONG 115 Deg 54 Min 0.000 Sec E

Caespitose small shrub, stems red; flowers bright yellow; no scent. On winter damp sandy flat.

Previous det.: *Synaphea stenoloba* A.S. George

Synaphea stenoloba

A.S.George (Proteaceae)

CONSERVATION STATUS:R

Coll.: A.S. George 17064 Date: 12 10 1993 (PERTH 04262387)

LOCALITY By junction of road to Alcoa Refinery and South Western Highway, NE of Pinjarra WA

LAT 32 Deg 37 Min 0.000 Sec S LONG 115 Deg 54 Min 0.000 Sec E

Caespitose small shrub; flowers bright yellow. On winter-damp sandy flat.

Mixed collection.

Synaphea stenoloba

A.S.George (Proteaceae)

CONSERVATION STATUS:R

TYPE STATUS: HOL

Coll.: A.S. George 17060 Date: 12 10 1993 (PERTH 04202082)

LOCALITY Near entrance to Alcoa Refinery from South Western Highway, NE of Pinjarra WA

LAT 32 Deg 37 Min 0.000 Sec S LONG 115 Deg 54 Min 0.000 Sec E

Caespitose small shrub, stems red; flowers bright yellow; no scent. On winter damp sandy flat.

Previous det.: *Synaphea stenoloba* A.S. George

Synaphea stenoloba

A.S.George (Proteaceae)

CONSERVATION STATUS:R

Coll.: D. Papenfus DP 697 Date: 13 10 1997 (PERTH 04910419)

LOCALITY 500 m E of South West Highway on Alcoa Refinery Road on N side, N of Pinjarra WA

LAT 32 Deg 36 Min 53.000 Sec S LONG 115 Deg 54 Min 5.000 Sec E

Dense straggly shrub, long trailing racemes with bright yellow flowers.

Low-lying plain, adjacent to inundated area.

Dry grey sand. Heath.

Abundance: Patchy (area not thoroughly searched).

Villarsia submersa

Aston (Menyanthaceae)

CONSERVATION STATUS:P4

Coll.: J.L. Robson s.n. Date: 10 11 1993 (PERTH 04165748)

LOCALITY "Aboriginal Bindjareb Park" - is located 100 m S along fenceline from the NW corner of this property and then 125 m at 135 degrees down scrub - rolled access fireline to population on the S side WA

LAT 32 Deg 38 Min 19.000 Sec S LONG 115 Deg 51 Min 40.000 Sec E

Flat. Swamp. Moist brown/grey clay/sand. Completely open, almost treeless swamp with odd stunted Paperbark.

Associated with *Hakea varia*, *Pericalymma ellipticum*, *Calothamnus lateralis*, *Melaleuca lateritia*, *Olearia elaeophila*, *Leptocarpus* sp. and Agricultural weeds.

Abundance: 10 plants only.

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
DECLARED RARE AND PRIORITY FLORA LIST
16 April 2003

SPECIES / TAXON	CONS CODE	CALM REGION	DISTRIBUTION	FLOWER PERIOD
<i>Aponogeton hexatepalus</i>	4	CF,SW	Perth, Pinjarra, Capel, Bunbury, Boyanup, Nannup	Aug-Sep
<i>Caladenia longicauda</i> subsp. <i>clivicola</i>	4	CF	Harvey, Dardanup, Dunsborough, Pinjarra, Lesmurdie, Cape Naturaliste	Sep
<i>Craspedia argillicola</i>	2	SW,CF	Pinjarra, Meelon, Waterloo	Aug-Oct
<i>Dillwynia dillwynioides</i>	3	SW	Harvey, Pinjarrah, Yunderup, Gingin, Perth	Aug-Oct
<i>Diuris drummondii</i>	R	SF,SW	Rocky Gully, Bridgetown, Pinjarra, Lake Muir, Frankland River, Nornalup Inlet, Perth	Nov-Dec
<i>Drosera occidentalis</i> subsp. <i>occidentalis</i>	4	SW	Gingin-Pinjarra, Palgarup, Darling Range, Kenwick, Wattle Grove, Beechboro	Nov-Dec
<i>Eryngium ferox</i> ms	3	CF	Collie, Pinjarra, Capel	Oct,Nov
<i>Grevillea manglesii</i> subsp. <i>ornithopoda</i>	2	SW	Murray River, Pinjarra, York, Jarrahdale, Mundaring, North Bannister	Sep-Oct
<i>Haloragis tenuifolia</i>	3	SW,CF, MW	Ruabon, Maddington, Harvey, Pinjarra, Upper Swan, Gingin, Cooljarloo, (Woorooloo, Midland, Byfields Mill)	Nov-Dec
<i>Jacksonia sericea</i>	4	SW	Wanneroo, Trigg, Perth, Karrinyup, Mandurah-Pinjarra, Neerabup NPK, Ardross	Dec-Feb
<i>Microtis media</i> subsp. <i>quadrata</i>	4	SC,SF,C F,SW	Albany-Augusta, Pinjarra, Jandakot	Dec-Jan
<i>Rumex drummondii</i>	4	MW,SC, SW	Regan's Ford, (Gingin), Kalgan River, Manypeaks, Pinjarra	
<i>Schoenus natans</i>	4	SW,CF,S F	Pinjarra, (Cannington), Lake Muckenburra, Gingin, Busselton, Beaufort River, West Dale, Lake Muir	Aug-Nov
<i>Synaphea</i> sp. Fairbridge Farm (D Papenfus 696)	1	SW	Pinjarra	Oct
<i>Synaphea stenoloba</i>	R	SW	Pinjarra	Aug-Oct
<i>Thelymitra stellata</i>	R	MW,SW, WB	Perth-Three Springs, Pinjarra, Dumblebung, Corrigin, Boonanaring	Oct-Dec

Hampton Road Bushland (and Lot 295 Alderson St. Pinjarra)

Contents of File:

2 discs: Presentation for WAPC; Photos Alderson St. 25/10/04

Photos

Maps

Legal Correspondence

Letter report on the wetlands, Lot 295 Alderson St. Pinjarra

Background in Relation to Conservation Values-Lot 295 Alderson St. Pinjarra

Proposed Rezoning Lot 295 Alderson St. Pinjarra

Field visit October 2004-Maps, photos

Upland and wetland vegetation and significant flora-Lot 295 Alderson St. Pinjarra

Additional Information, Vegetation-Lot 295 Alderson St. Pinjarra

Wetland Assessment Lot 295 Alderson St. Pinjarra

Shire of Murray Town Planning Scheme No.4 Amendment 171-Rezoning of Lot 295

Alderson St Pinjarra/Flora List

Site Visit October 2003

Extract from Final Guidance No. 10

System Six Update Programme-Flora Survey Information

Background in Relation to Lot 295 Alderson St. Pinjarra

Submission 3

Submission 5

Remnant Vegetation of the Alluvial Soils of the Eastern Side of the Swan Coastal Plain

Peel Region Scheme Amendment No 012/33A

" " " " " " - June 2007

Area Descriptions

Flora List for Hampden Rd, Pinjarra (Subm 98)

Flora List for Lot 350 Hampton Rd, Pinjarra

Flora Survey Information

Pinjarra2 Submission Area

Lease Lot 190 Hampton Rd, Pinjarra

Survey Sheets

Report on Bird Species Seen at Pinjarra

Bushland Submission Form Lot 299 Hampton Rd, Pinjarra

REMNANT VEGETATION
on the
ALLUVIAL SOILS
of the
EASTERN SIDE
of the
SWAN COASTAL PLAIN

LIBRARY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WEST GALLA SQUARE
141 ST. GEORGES TERRACE, PERTH

**Full document
available
on request**

Lot 295
Alderson St
Pinjarra.

Prepared by

Bronwen Keighery and Malcolm Trudgen

for the Department of Conservation and Land Management. This project was funded under the National Estate Program, a Commonwealth-financed grants scheme administered by the Australian Heritage Commission (Federal Government) and the Heritage Council of Western Australia (formerly the Western Australian Heritage Committee) (State Government).

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PEEL REGION SCHEME AMENDMENT NO. 012/33A

Contents :

Peel Region Scheme Amendment Report

Submissions for consideration at the hearings

Lot 295 Alderson Street, Pinjarra - Background In Relation To Conservation Values

Draft recommendations for determination of these submissions

PRS AMENDMENT
012//33A



WESTERN AUSTRALIAN PLANNING COMMISSION



**PEEL REGION SCHEME
Amendment No. 012/33A
(Minor Amendment)**

REGIONAL OPEN SPACE - WEST PINJARRA

Shire of Murray

AMENDMENT REPORT

October 2005

MANDURAH
WESTERN AUSTRALIA



Government of
Western
Australia



Western
Australian
Planning
Commission

**PEEL REGION SCHEME
Amendment No. 012/33A**

REGIONAL OPEN SPACE - WEST PINJARRA

AMENDMENT REPORT

Shire of Murray



October 2005

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Published by the
Western Australian Planning Commission,
Albert Facey House,
469 Wellington Street,
Perth Western Australia 6000

PRS Amendment No. 012/33A. Amendment Report
File 833-6-16-8
Published October 2005

ISBN 0 7309 9542 9

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Copies of this document are available in
alternative formats on application to the
disability services co-ordinator.

CONTENTS

The Peel Region Scheme	v
Abbreviations	ix
1. Purpose	1
2. Environmental Protection Authority Advice.....	1
3. Scope and Content of the Amendment.....	1
4. Sustainability Appraisal	2
5. Implementation	3
6. The Amendment Process.....	3
7. Submissions on the Amendment.....	3
8. Hearings	4
9. Modifications to the Amendment.....	4
10. Final Outcome.....	4
Figure 1	5
Appendix A	Inner Peel Region Structure Plan 1997 (Extract)
Appendix B	Notice of Environmental Assessment
Appendix C	Your Property and the Peel Region Scheme
Appendix D	Preparing For Your Submission and Hearing
Appendix E	Submission Form for this Amendment

THE PEEL REGION SCHEME

What it is and how it is amended

PLANNING FOR THE PEEL REGION

The Peel Region enjoys features which make it a very attractive place in which to live, and for recreation and tourist activities. With the increasing population of Western Australia, the region is rapidly growing. As it grows, change must be planned and managed to provide an effective land use structure, to preserve the natural features of the region and make provision for important regional infrastructure.

Provision must be made for future housing, employment opportunities and transport needs to meet this growth. It is also necessary to set aside land for conservation and recreation.

The purpose of the Peel Region Scheme is to provide for balanced change in land use and to provide mechanisms which allow the acquisition of land for regional public purposes and the means by which affected landowners can be compensated.

WHAT IS THE PEEL REGION SCHEME?

The Peel Region Scheme (PRS) is a large town planning scheme which guides land use in the Peel Region. This area stretches from Singleton and Keysbrook in the north to Wagerup in the south, and eastwards well beyond the Darling Scarp.

The PRS defines the future use of land, dividing it into broad zones and reservations. It requires local government town planning schemes to provide detailed plans for their respective parts of the region. These schemes must be consistent with the PRS.

The PRS uses a set of maps and a scheme text. The scheme text provides planning rules for zones and reservations, which are shown on the maps in their respective colours and patterns.

This plan has been in operation since March 2003 and provides the legal basis for planning in the Peel Region.

To plan for changing needs, the PRS needs to be amended from time to time.

WHAT IS AN AMENDMENT?

An amendment to the PRS changes the zoning or reservation of land to allow for a different land use.

When a rezoning or a new reservation is considered, an amendment to the PRS is advertised to seek comment from the wider community and all levels of government.

The process allows for extensive community consultation to review the proposal before a final decision is made.

HOW THE PEEL REGION SCHEME IS AMENDED - THE PROCESS FOR MINOR AMENDMENTS

The Western Australian Planning Commission (WAPC) is responsible for keeping the PRS under review and initiating changes where they are seen to be necessary.

The amendment process is regulated by the *Western Australian Planning Commission Act 1985* as read in conjunction with the *Metropolitan Region Town Planning Scheme Act 1959*. The amendment proposed in this report is being made under the process set out in Section 33A of the latter Act. Such amendments are often referred to as 'minor' amendments.

The process of a 'minor' amendment to the PRS includes the following steps:

- The proposed amendment is referred to the Environmental Protection Authority (EPA) to decide on the level of environmental assessment.

Where the EPA requires an environmental review, this is carried out before the amendment is advertised.

- The amendment (and environmental review where required) is advertised for public inspection, inviting submissions. Advertisements are placed in local and statewide newspapers, and information is made available on the WAPC's internet site.

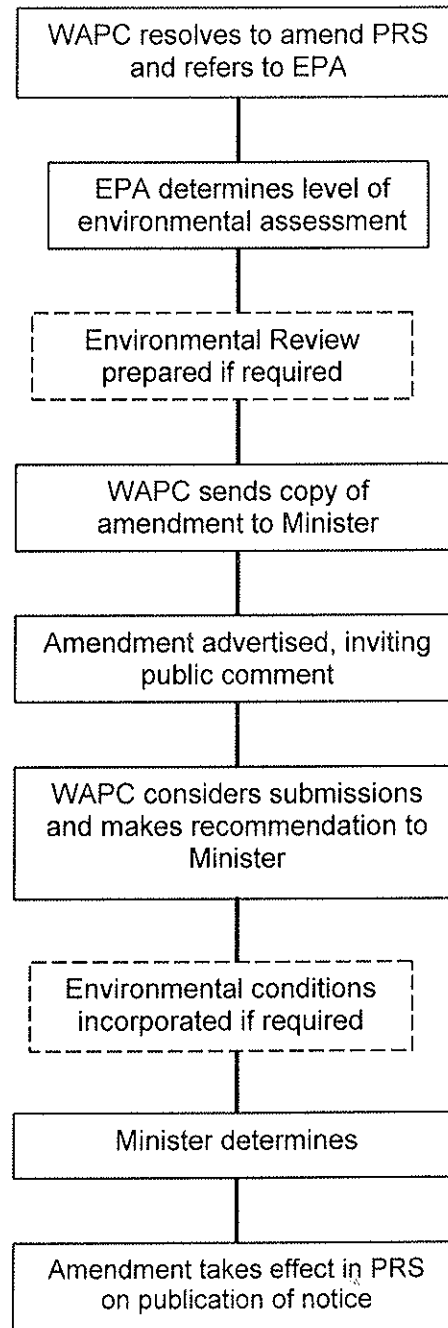
Landowners whose property is directly affected by a proposed change are contacted in writing.

- A 60 day period is provided for written submissions on the amendment to be received by the WAPC.
- As soon as practicable, after the end of the public comment period, the WAPC considers all submissions and recommends whether to modify the amendment or proceed with the original proposal. The WAPC's report and recommendation are presented to the Minister for consideration.
- If the Minister approves an amendment, it becomes a legally effective part of the Scheme upon the publishing of a notice advising of the Minister's approval. The approved amendment is placed on public display.

When the PRS is amended, local town planning schemes within the Scheme Area must also be amended to match the broad zonings and reservations of the PRS. Local town planning schemes provide more-detailed planning for their respective areas.

Within three months of a PRS amendment, any local government must initiate an amendment to its town planning scheme.

The following diagram shows the main steps.



ZONES AND RESERVATIONS

Zones and reservations in the PRS are broad categories. They are not precisely defined or limited. The following descriptions are a guide.

ZONES

Urban: Areas in which a range of activities can be undertaken, including residential, commercial, recreation and light industry

Urban deferred: Land identified for future urban uses following the extension of urban services, the progressive development of adjacent urban areas, and resolution of any environmental and planning requirements relating to development.

The WAPC must be satisfied that these issues have been addressed before rezoning to Urban.

Regional Centre: Strategic regional centres for major retail, commercial and office facilities as well as employment, civic, business and residential uses.

Industrial: Land on which manufacturing, processing, warehousing and related activities are undertaken.

Rural: Land on which a range of agricultural, extractive and conservation uses are undertaken.

Private Recreation: Areas of significance to the region's recreation resource which are, or are proposed to be, managed by the private sector.

RESERVATIONS

Land is reserved for community purposes. It may be reserved to protect a resource or to provide areas for infrastructure. The following descriptions are a guide.

Regional Open Space: Land of regional significance for ecological, recreation or landscape purposes.

Railways: Provides for public transit routes, freight rail lines and associated facilities such as marshalling yards, maintenance depots and park-and-ride stations.

State Forests: Areas of woodland located on Crown land managed under the *Conservation and Land Management Act 1984*.

Waterways: Permanent inland and coastal waters including any substantial rivers and reservoirs.

Primary Regional Roads: These are the most important of the roads with regional significance in the planned road network, and which are currently, or proposed to be declared under the *Main Roads Act 1930*.

Other Regional Roads: These are roads with regional significance in the planned road network for which the planning responsibilities are shared by the WAPC and local governments.

Public Purposes: Land for public facilities such as hospitals, high schools, universities, utilities for electricity, water and treatment of wastewater, Commonwealth government and other special uses.

SPECIAL CONTROL AREAS

SCA No. 1 - Water Catchments: Water sources protected for high quality public water supply. These areas have strict controls on land use to avoid harm to the water resource.

WHAT IF MY LAND IS REZONED?

Landowners may find that an amendment seeks to rezone their property, for example from Rural to Urban, or to Urban Deferred.

If the zoning is changed, landowners do not have to change their use of the land or lifestyle. They can stay as they are, or they may set about changing their land use in keeping with the new zoning. For instance, some may seek approval to subdivide their land, or apply to develop it in some way that is consistent with the new zoning.

The WAPC realises many people choose their properties because they like them as they are and may not want to change from, for example, a rural-residential lifestyle to an urban area. Others are keen to change the land use.

For these reasons, amendments to the PRS are advertised so that all affected landowners, and anyone else, will have time to examine the proposals and lodge a submission if they choose.

WHAT IF MY LAND IS RESERVED?

Land is reserved because it will be needed in due course for a public purpose such as Regional Open Space or Other Regional Roads.

If your land is marked for reservation in an advertised amendment, you can continue to use and enjoy your property. Generally, reserved land can remain in private ownership until it is needed for the purpose for which it is reserved. Regional planning schemes include reservations over many areas of land which are privately owned.

To protect landowners, there are procedures relating to the acquisition of land or compensation by the WAPC. These are outlined in the brochure *Your Property and the Peel Region Scheme* which is reproduced at the back of this report and available separately from the Department for Planning and Infrastructure.

HOW CAN MY VIEWS BE HEARD?

You can lodge a written submission on the proposed amendment during the advertising period. A submission form is included at the back of this publication, from the places of display for this amendment and from the WAPC's internet site.

PUBLICATIONS

Amendments made to the PRS using the provisions of section 33A will, in most cases, contain information published under the following titles:

Amendment Report

This document is available from the start of the public advertising period for the proposed PRS amendment. It sets out the purpose and scope of the amendment, explains why the proposal is considered

necessary, and informs people how they can comment.

Environmental Review Report

The EPA considers the environmental impact of an amendment to the PRS before advertising takes place. Should the EPA require assessment an Environmental Review is undertaken, and that information is made available for comment along with the *Amendment Report*.

Volume 1 - Report on Submissions

This publication is the response of the WAPC to issues raised in submissions. The WAPC's report is forwarded to the Minister for consideration when the amendment is considered for approval.

Volume 2 - Submissions

All written submissions received on the proposed amendment are reproduced and published as a public record.

Volume 3 - Transcript of Hearings

There is no statutory requirement for 'hearings' to be conducted for Section 33A ('minor') amendments. The WAPC may however, where it sees fit, incorporate hearings into the process.

In these cases, a person who has made a written submission may also choose to appear before a Hearings Committee to express their views. All hearings are recorded and transcribed and all transcripts are published as a public record.

ABBREVIATIONS

DoE	Department of Environment
EPA	Environmental Protection Authority
PRS	Peel Region Scheme
WAPC	Western Australian Planning Commission

AMENDMENT No. 012/33A TO THE PEEL REGION SCHEME

REGIONAL OPEN SPACE - WEST PINJARRA

1. PURPOSE

The purpose of this amendment is to include Lots 295, 350 and 354 Alderson Street, Lots 299 and 309 Hampton Road, and portion of the Alderson Street road reserve, Pinjarra, within the Regional Open Space reservation.

2. ENVIRONMENTAL PROTECTION AUTHORITY ADVICE

The proposed amendment was referred to the Environmental Protection Authority (EPA) for advice on whether environmental assessment would be required.

The EPA has advised that the overall environmental impact of the amendment would not be severe enough to warrant assessment under Part IV of the Environmental Protection Act, 1986 and that it is not necessary to provide any advice or recommendations.

3. SCOPE AND CONTENT OF THE AMENDMENT

The amendment proposes the following change to the PRS :

PROPOSAL (Figure 1)

Transfer Lots 295, 350 and 354 Alderson Street, Lots 299 and 309 Hampton Road, and portion of the Alderson Street road reserve from Rural zone to Regional Open Space reservation

(Shire of Murray)

Lots 295 and 354 Alderson Street and Lot 309 Hampton Street contain a combination of Banksia, Marri and Sheoak woodlands and associated shrublands in good to excellent condition, extending partly onto Lot 350 Alderson Street. Most of Lot 350 comprises a large seasonal wetland containing a variety of plant species, including declared rare flora. The combined area is the habitat for a range of fauna.

Lot 295 has an area of 18.2 hectares and is in private ownership. Lots 350 is Crown land with an area of 15.8 hectares and is vested in the Department of Conservation and Land Management for *Conservation and the Protection of Aboriginal Heritage*. Lots 309 (1.2ha) and 354 (6.6ha) are also Crown land, vested in the Aboriginal Lands Trust for the *Use and Benefit of Aboriginal Inhabitants*.

In the *Inner Peel Region Structure Plan, 1997*, the subject land (see Appendix A) is classified *Natural Resource Protection Area - Subject to Further Study*. This classification applies to areas of bushland in good condition, requiring further studies to determine appropriate mechanisms for their protection. Also, the Shire of Murray's *Pinjarra Urban Expansion Plan (1998)* states that development within the Natural Resource Protection Area should be subject to a full study to protect significant remnant vegetation.

Further examination of the land has taken place. This has included a detailed wetland and vegetation assessment for Lot 295 (the land in private ownership) and a review of the

conservation values of the overall area by the Department for Planning and Infrastructure in consultation with the Department of Environment and the Department of Conservation and Land Management. The remnant vegetation is considered locally and regionally significant because of the quality and range of vegetation types, including both upland and wetland areas, and the presence of significant and rare flora. This significance is greatly increased by the amount of clearing that has taken place in the area and by the presence of Conservation Category Wetlands on Lot 295 and 350. Accordingly, the conservation values of the land support inclusion of the land within the Regional Open Space reservation.

Lots 309, 350 and 354 have considerable significance to the Aboriginal community in terms of heritage and natural values, and this is reflected in the existing vesting of the land. Discussions with representatives of the Aboriginal community and Department of Indigenous Affairs indicate protection of the conservation values of Lots 309, 350 and 354 would broadly correspond with the interests of the Aboriginal community and that inclusion of the land within the Regional Open Space reservation would be more appropriate than the present Rural zoning. Importance has been placed on the Aboriginal heritage and potential education values of this land and consequent social benefits.

Lot 299 is Crown land vested in the Aboriginal Lands Trust, also for the *Use and Benefit of Aboriginal Inhabitants*. Having an area of only 482m², being surrounded by other land subject of the proposed amendment and containing improvements that are no longer in serviceable condition, it would also be appropriate for Lot 299 to be included within the Regional Open Space reservation.

Inclusion of these lots within the Regional Open Space reservation under the Peel Region Scheme would not alter the existing tenure of the land dedicated to the interests of the Aboriginal community. Rather, it is envisaged that Lots 299, 309 and 354 should remain vested in the Aboriginal Lands Trust, for the use and benefit of the Aboriginal community, as this properly reflects the history and value of the land and is compatible with the protection of its natural values. The reservation could accommodate some development associated with Aboriginal heritage and education values within the portion of Lot 354 where conservation values are limited.

Lot 296 Alderson Street (see Appendix A), which is privately owned, is also classified *Natural Resource Protection Area - Subject to Further Study* in the *Inner Peel Region Structure Plan, 1997*. It also contains a Conservation Category Wetland. In due course, separate, further study will need to be undertaken to determine the future zoning and/or reservation of this land.

4. SUSTAINABILITY APPRAISAL

The proposed amendment would result in the reservation of 43 hectares of land with high conservation values for Regional Open Space. Having regard for the amount of clearing and drainage that has taken place on this part of the Swan coastal plain, reservation of the land is important to sustaining these conservation values in a purely environmental context. Separately, protection of the vegetation and wetlands on this land also sustains values important to the Aboriginal community for their intrinsic value. Furthermore, this contributes to sustaining Aboriginal heritage and culture, education values in the Aboriginal community and potential, broader social benefits. These natural features also contribute favourably to the regional and local landscape, as an overall community benefit. Bringing together these six contiguous land parcels within the Regional Open Space reservation would enhance both the immediate and the long term value of the land in terms of all three perspectives; conservation, Aboriginal culture and regional landscape.

5. IMPLEMENTATION

Inclusion of the land within the Regional Open Space reservation would result in a change to the Shire of Murray Town Planning Scheme, to make it consistent with the PRS. Reservation of the land would also mean that, subject to some exemptions, development applications for this land would require the approval of the WAPC.

6. THE AMENDMENT PROCESS

The procedures for amending the Peel Region Scheme are prescribed by the *Western Australian Planning Commission Act 1985* as read in conjunction with the *Town Planning and Development Act 1928* and *Metropolitan Region Town Planning Scheme Act 1959*.

Section 33A of the *Metropolitan Region Town Planning Scheme Act* sets out the main elements of the procedure for amendments which do not constitute substantial alteration to the Scheme. In essence, this process involves:

- formulation of the amendment by the WAPC;
- referral to the EPA for environmental assessment;
- completion of an Environmental Review (if required) to EPA instructions;
- public submissions being sought on the proposed amendment (including Environmental review if required);
- consideration of submissions;
- approval, with or without with any modifications in response to submissions, or decline to approve by the Minister; and
- Gazettal of the approved amendment to give it effect in the Scheme.

Having regard for the indigenous significance of the area, the local Indigenous community will be specifically consulted and a formal presentation will be made to the Aboriginal Lands Trust during the public submission period for the proposed amendment.

7. SUBMISSIONS ON THE AMENDMENT

The Amendment will be advertised for public submissions for 60 days from the date of gazettal, being Tuesday 18 October 2005.

Copies of the Amendment will be available for public inspection at:

- the Peel Region Office of the Department for Planning and Infrastructure;
- the Perth Office (Wellington Street) of the Department for Planning and Infrastructure;
- the offices of the Shire of Murray; and
- the State Reference Library.

Written submissions or comments on the Amendment should be sent to:

Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
MANDURAH WA 6210

Submission forms for this Amendment No. 012/33A are available from the places of display above. For your convenience a submission form is also attached in the back of this report.

Submissions must be received by close of business (5.00 pm) Monday, 19 December 2005.

8. HEARINGS

While there is no statutory requirement to conduct 'hearings' for a Section 33A (minor) amendment, there is the intention to do so. Any person objecting to the proposals will also have the opportunity to personally present the basis of their submission to a committee appointed by the Western Australian Planning Commission. Details required for attending the hearings are on side two of the submission form.

The submissions and the transcripts of public hearings will become public documents. These will be published and will be made available free of charge at the conclusion of the amendment.

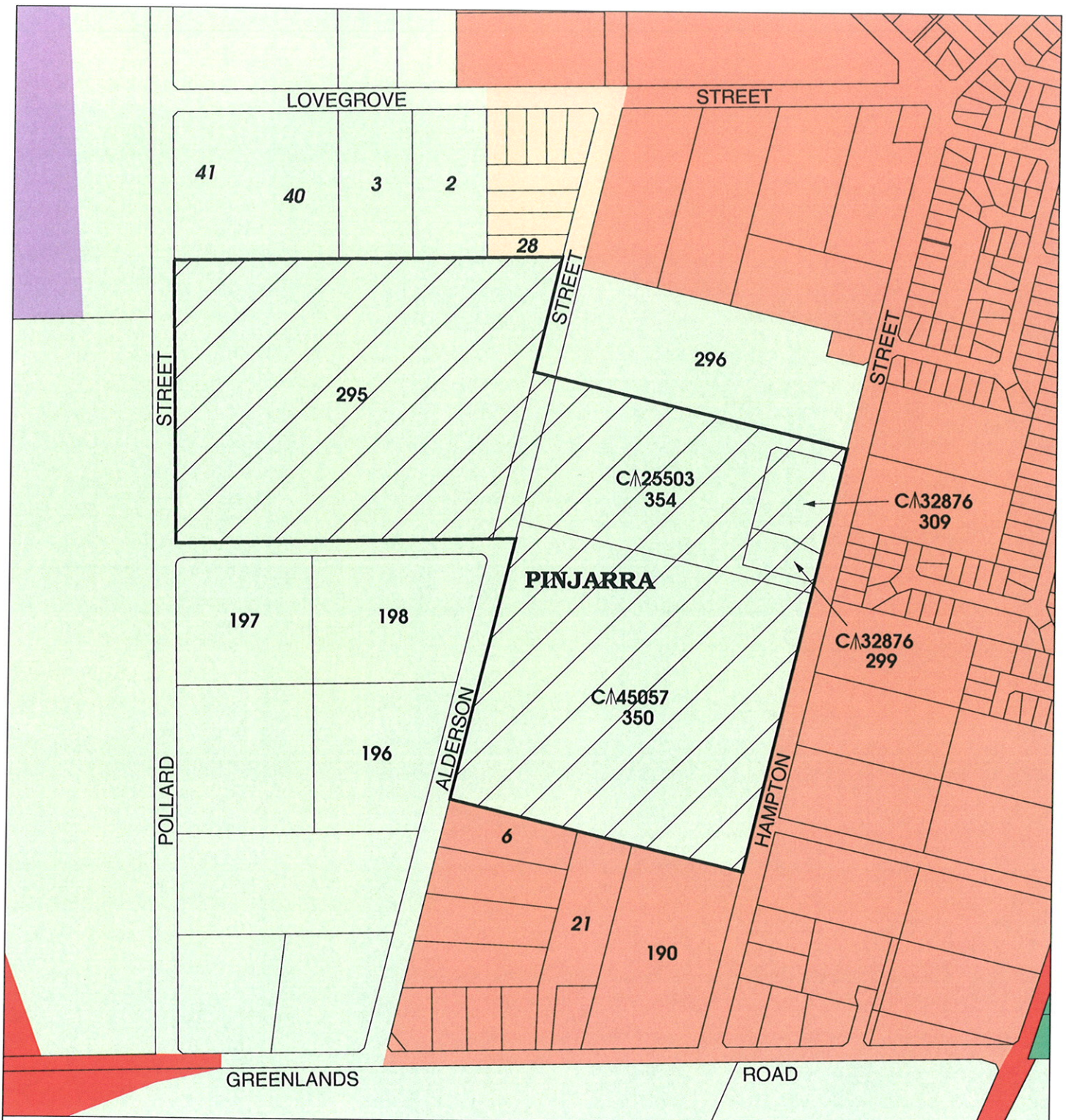
9. MODIFICATIONS TO THE AMENDMENT

After considering any comments received from Government agencies and the public, the Western Australian Planning Commission may recommend that the Minister modify the amendment. The Minister may approve the amendment, with or without any modifications in response to submissions, or decline to approve.

10. FINAL OUTCOME

People who have made submissions, along with all affected landowners will be notified of the final outcome.

FIGURE 1



PEEL REGION SCHEME - REGIONAL OPEN SPACE - WEST PINJARRA

19 AUGUST 2005

AS ADVERTISED

FIGURE 1

LEGEND

PROPOSED:

 REGIONAL OPEN SPACE RESERVATION

EXISTING:

 INDUSTRIAL ZONE

 REGIONAL OPEN SPACE RESERVATION

 URBAN ZONE

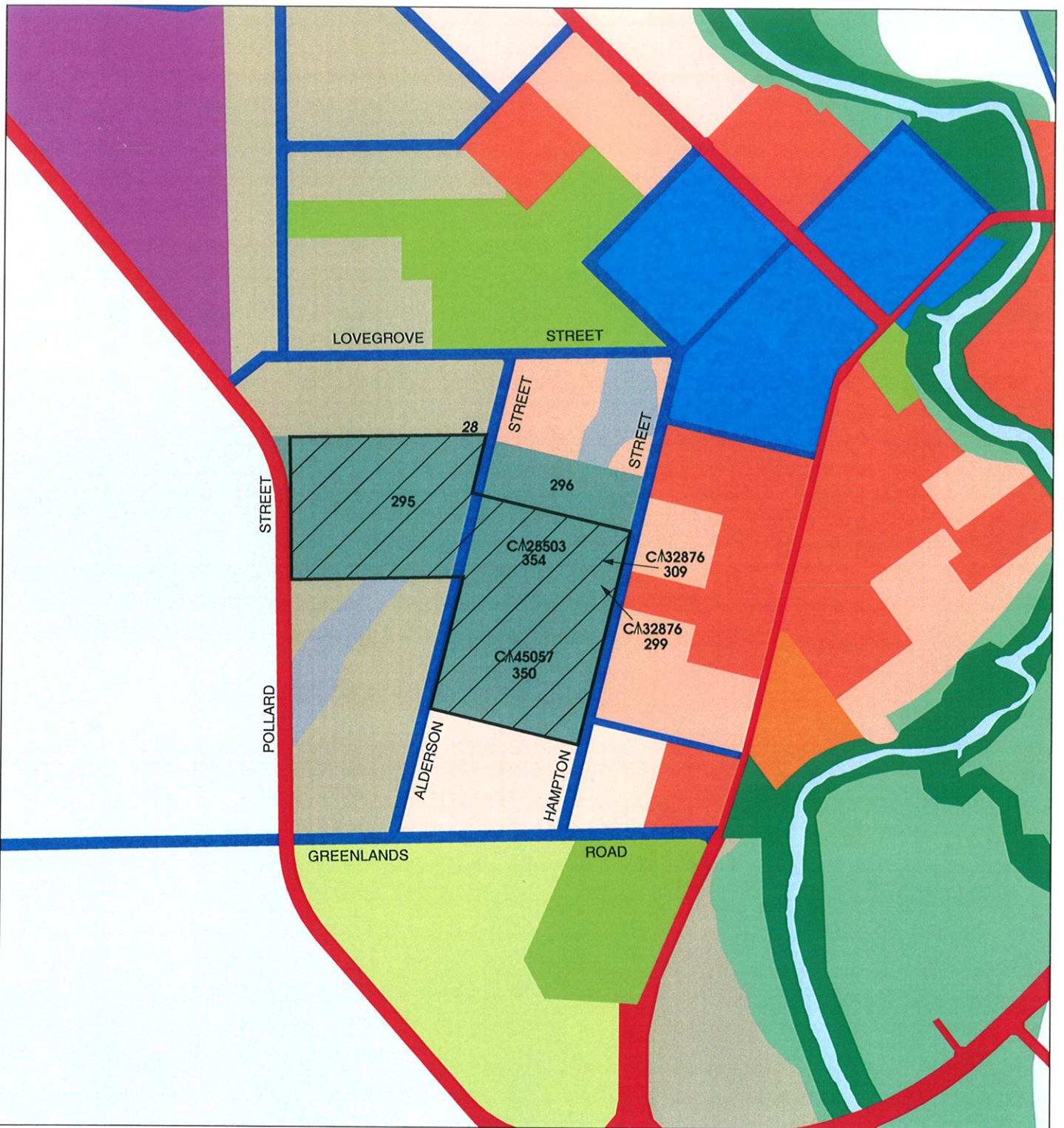
 RURAL ZONE

 URBAN DEFERRED ZONE

 PRIMARY REGIONAL ROADS RESERVATION

APPENDIX A

INNER PEEL REGION STRUCTURE PLAN, 1997 (Extract)



INNER PEEL REGION STRUCTURE PLAN 1997

PROPOSED:

REGIONAL OPEN SPACE RESERVATION

LEGEND

Inner Peel Region Final Structure Plan 1997 :

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> Urban Future Urban - Cat A1 Future Urban - Cat A2 Future Urban - Cat B Major Commercial | <ul style="list-style-type: none"> Industry - Existing and Future Institutions - Social Rural Rural Living Waterways | <ul style="list-style-type: none"> Open Space - Conservation Floodway Protection Policy Area Natural Resource Protection Area - Subject to Further Study Open Space - Recreation Open Space - Drainage - WSD |
| <ul style="list-style-type: none"> State Highways and Roads - Existing and Proposed | | <ul style="list-style-type: none"> Important Roads - Existing and Proposed |

APPENDIX B

NOTICE OF ENVIRONMENTAL ASSESSMENT



Environmental Protection Authority

Westralia Square,
141 St Georges Terrace, Perth, Western Australia 6000.
Telephone: (08) 9222 7000. Facsimile: (08) 9222 7155.

Postal Address: PO Box K822,
Perth, Western Australia 6842.
Website: www.epa.wa.gov.au

Commissioner
Western Australian Planning Commission
Albert Facey House, 469 Wellington St
PERTH WA 6000

Our Ref CRN215269
Enquiries Glen McLeod-Thorpe

Attn: Mr R.N. Stokes

SCHEME AMENDMENT TITLE: Peel Region Scheme Amendment 012/33A, rezoning from Rural to Regional Open Space

SCHEME AMENDMENT LOCATION: Lots 295 350 & 354 Alderson Street Lots 299 & 309 Hampton Road & Portion of Alderson Street Road Reserve

LOCALITY: West Pinjarra

RESPONSIBLE AUTHORITY: Western Australian Planning Commission

LEVEL OF ASSESSMENT: Scheme Not Assessed (no appeals)

Thank you for your letter of 22 August 2005 referring the above scheme amendment to the Environmental Protection Authority (EPA).

After consideration of the information provided by you, the EPA considers that the proposed scheme amendment should not be assessed under Part IV Division 3 of the *Environmental Protection Act 1986* (EP Act) and that it is not necessary to provide any advice or recommendations.

Please note the following:

1. For the purposes of Part IV of the *EP Act*, the scheme amendment is defined as an assessed scheme amendment. In relation to the implementation of the scheme amendment, please note the requirements of Part IV Division 4 of the *EP Act*.
2. There is no appeal right in respect of the EPA's decision on the level of assessment of the scheme amendment.
3. A copy of this letter will be sent to the relevant authorities and will be available to the public on request.



K J Taylor
Director
Environmental Impact Assessment

19 September 2005

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE

20 SEP 2005

FILE 833-6-16-8 (KM)

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE

22 SEP 2005

FILE 833-6-16-8

APPENDIX C

YOUR PROPERTY AND THE PEEL REGION SCHEME

Your Property and the Peel Region Scheme

If your land is reserved in the Peel Region Scheme

The Peel Region Scheme (PRS) is the statutory land use plan for the Peel Region. It classifies land into zones and reservations. As the need arises and the region develops, so the PRS will need to be amended.

The PRS is available for inspection at the Department for Planning and Infrastructure.

Under the PRS, zones are the areas identified for purposes such as residential (Urban zone), industry (Industrial zone), rural activities (Rural zone), Regional Centre zone etc.

Reservations are areas that have been identified for a public purpose. Examples include school sites, railways, major roads, regional open space etc.

Prior to land being rezoned or reserved, owners are contacted and invited to make a submission on the proposed changes through the amendment process.

Land affected by a reservation will at some time be acquired by the Government, but can generally remain in private ownership until it is actually needed for the public purpose.

There are several options available to the owners of reserved land :

- Retain ownership and continue with the quiet enjoyment of the property until it is needed for the public purpose. You may complete any development or subdivision of the property that was approved prior to the reservation coming into effect.
- Sell the property on the open market to another person(s). The Western Australian Planning Commission (Commission) recognises that, due to

the reservation, this may be difficult. Therefore, subject to acquisition priorities and the availability of funds, the Commission would be willing to consider purchasing a reserved property if an owner is unable to sell the land on the open market.

- Offer the property for sale to the Commission. Subject to acquisition priorities and availability of funds, the Commission would be willing to consider acquisition of a reserved property. Where this occurs, the property is purchased at the current market value, calculated as it would have been if the land was not affected by the reservation. The value is determined by independent sworn valuations. If necessary, there are avenues of arbitration and appeal for you, to make sure the valuation is fair.
- Make a claim for compensation for injurious affection if, due to the reservation, the Commission refuses a development application or approves a development application subject to conditions unacceptable to you. In such cases, the Commission may elect to purchase the property instead of paying compensation with the purchase price determined in the same way as a negotiated purchase.

Am I entitled to compensation ?

If your land is reserved in the PRS, you may be able to make a claim for compensation for injurious affection if :

- You are the owner of the property when it is first reserved in PRS and you can only sell the property on the open market at a reduced price.

or

- The Commission has either refused a development application over the property or has approved a development

- application subject to conditions that are unacceptable to you. This applies whether you are the first or subsequent owner.

How do I claim compensation ?

1. If you have chosen to sell the property on the open market at a reduced price and wish to receive compensation you will need to complete a Notice of Intention to Sell form that is available from the Commission.

If you do so, the Commission will confirm the extent of the reservation on the land and forward the notice to the Board of Valuers.

The Board will then determine the sworn unaffected value of the property. You may wish to meet with the Board to raise any matters you believe are relevant to the value of the property.

Following determination by the Board :

- You will be notified of the unaffected value of the property.
- You pay a valuation fee to the Commission, after which you will be notified of the affected value of the property - this will represent the minimum sale price.
- You then arrange sale of the property (privately or through a real estate agent). Note: The sale price must not be less than the affected value.
- When the property is sold, you may make a claim for compensation for injurious affection for the difference between the sale price and the unaffected value determined by the Board.
- If the property does not sell within one year of the Board's valuation, you may

ask the Board for a revaluation of the property. The sale process is then repeated.

- Once compensation has been paid, a caveat is lodged on the Certificate of Title, to indicate that compensation has been paid. Please note that compensation is only payable once except where a further reservation is established or an existing reservation increased by amendment to the PRS.

Alternatively, you may ask the Commission to purchase the property, as you have been unable to sell the property privately.

2. If the Commission has refused your development application or approved it subject to conditions unacceptable to you and the property is reserved in the PRS, you may make a claim for compensation for injurious affection. This claim must be made within six months of the Commission's decision on the application.

In such a case the Commission will either pay compensation or may elect to purchase the property in lieu of paying compensation.

If the Commission elects to purchase the property, sworn valuations are obtained for the market value of the property as at the date of the election to purchase, calculated as it would have been if the land was not affected by the reservation. Please note that the date of valuation is fixed at the date of election to purchase.

What is compulsory acquisition ?

A situation may arise where a property is needed as a priority for a public purpose and the owner is unwilling to sell the property to the Commission.

In such a case, the property may be compulsorily acquired (or "taken") for that public purpose.

Since 1963 the Metropolitan Region Scheme (MRS) for Perth has operated and the same provisions have applied. Under the MRS, compulsory acquisition is an option of last resort and only occurs for essential and committed public works. In relation to regional open space reservations, compulsory acquisition has very rarely taken place. The Commission's preference is to acquire land by negotiated purchase when approached by the landowner.

If the Commission has taken your property, you have the right to make a claim for compensation in respect of the land taken.

In such cases, the Commission will have the land valued by sworn valuers and following the checking of the compensation claim will make an offer of compensation for the taken land.

In all cases, avenues of arbitration and appeal are available in regard to the amount of compensation offered, if necessary.

Should you have any queries concerning the matters raised in this brochure, please contact the:

Land Asset Management Directorate
Western Australian Planning Commission
Albert Facey House
469 Wellington Street
Western Australia 6000

APPENDIX D

PREPARING FOR YOUR SUBMISSION AND HEARING

PREPARING FOR YOUR SUBMISSION AND HEARING

The Western Australian Planning Commission (WAPC) welcomes comment on proposed amendments to the Peel Region Scheme from interested individuals, groups and organisations.

What is a submission?

A submission is a way to express your opinion and provide information. It is an opportunity to explain why the amendment should be supported, withdrawn or modified. Suggestions of alternative courses of action are also welcomed.

Making a submission is not the same as voting in an election. The number of submissions received for or against a proposal will not in itself determine the result. Rather, it is the reasoned argument of why a particular thing should or should not be done. Your submission will assist the WAPC in reviewing its planning proposal before proceeding.

Advertised proposals are often modified in response to the public submission process.

What should I say?

Your comments should focus on the particular issues that arise from the proposed amendment. If there are a number of components in the amendment, please indicate exactly which ones you are addressing.

It is important that you state your point of view clearly. Give reasons for your conclusions and recommendations. These may include an alternative approach or other ways for the WAPC to improve the amendment or make it more acceptable. Indicate the source of your information or argument where applicable.

If you prefer not to write your own comments, you may consider joining a group interested in making a submission on similar issues. Joint submissions can increase the pool of ideas and information.

Before lodging your submission

Please remember to complete the Submission Form (Form33A – Appendix E). Include your name and full postal address on side one and information related to the hearings on side two. It is preferred that any attachments be loose rather than bound.

The closing date for submissions and where they should be lodged is shown on the Form33A and in the 'Submissions on the Amendment' section of the *Amendment Report*. To be eligible to make a presentation to the Hearing Committee, your written submission must be received by the closing date.

Some amendments may be subject to an Environmental Review. Under these circumstances, the WAPC will forward a copy of any submission raising environmental issues to the Environmental Protection Authority.

You should be aware that the calling for public submissions is a public process, and all submissions will become public documents. Presentations made to the Hearings Committee are an extension of the submission process, and the transcripts of the hearings also become a public document.

Do you want a hearing?

While there is no statutory requirement to conduct hearings for a minor amendment, the WAPC provides this opportunity. Anyone who has made a written submission on the amendment will have the opportunity to personally present the basis of their submission to a Hearings Committee.

These hearings are arranged so that the Western Australian Planning Commission can listen to a person should they wish to explain or expand upon their written submission. A hearing is intended for listening to points of view and planning rationale, and is not a forum of general public debate. In the case of a group, a spokesperson to represent the group must be appointed.

All hearings are recorded and transcribed. The transcripts of any public hearings, along with all written submissions, are published as public records. The WAPC recommendations are also published in a *Report on Submissions*.

APPENDIX E

SUBMISSION FORM FOR THIS AMENDMENT



Western Australian Planning Commission Act 1985
as read in the conjunction with the
Metropolitan Region Town Planning Scheme Act 1959

Peel Region Scheme
Amendment No. 012/33A
Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
MANDURAH WA 6210

Submission number

I/We (Please print clearly)
(Name)

of Postcode

Contact telephone number Email

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

[Lined area for submission details]

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number Street address

Locality (suburb)

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission

Peel Region Scheme
Amendment No. 012/33A
Hearing of Submissions

There will be an opportunity for people who have made written submissions to discuss matters they have raised in their submission by commenting in person to a Hearings Committee.

These hearings are arranged so that the Western Australian Planning Commission can listen to a person should they wish to explain or expand upon their written submission. In the case of a group, a spokesperson to represent the group must be appointed.

A hearing is intended for listening to points of view and planning rationale and is not a forum of general public debate.

All hearings are recorded and transcribed. The transcripts of 'private' hearings remain confidential. All written submissions, transcripts of public hearings and the Commission's report will become public documents.

You do not have to attend a hearing

The comments presented by you in this written submission will be considered.

Please complete the following (indicate by placing a tick in the appropriate box)

<input type="checkbox"/> NO I do not wish to speak at the hearing (Please go to the end of the form and sign)
<u>Or</u>
<input type="checkbox"/> YES I do wish to speak at the hearings. (If you have indicated yes please complete the following details. You will be contacted to arrange a time for your hearing)
<u>I will be represented by</u>
<input type="checkbox"/> Myself. My telephone number is (business hours)
<u>Or</u>
<input type="checkbox"/> My agent or spokesperson (an agent may be from a local group)
Agent's name
Agent's telephone number (business hours)
Group's name
Mailing address
<u>I would prefer my hearing to be conducted in:</u>
<input type="checkbox"/> Public (with a public hearing, other persons may attend)
<u>Or</u>
<input type="checkbox"/> Private (a private hearing is conducted behind closed doors and only people nominated by you and the Hearings Committee will attend. Material presented at a private hearing will remain confidential)

To be signed by person/s making the submission

Signed..... Date..... Signed..... Date.....

Note: Submissions MUST be received by the advertised closing date, being close of business 5.00pm on Monday 19 December 2005. Late submissions will not be considered.

Contacts: Telephone 9581 4471. Fax: 9581 5491
Internet: www.wapc.wa.gov.au

SUBMISSIONS



Form 33A

Western Australian Planning Commission Act 1985
as read in the conjunction with the
Metropolitan Region Town Planning Scheme Act 1959

Peel Region Scheme
Amendment No. 012/33A
Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
MANDURAH WA 6210

Submission number
3

I/We RON ROBERTSON (Please print clearly)
(Name)
of 32 RIVER DRIVE PINJARRA Postcode 6208
Contact telephone number 95311645 Email NONE

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

PLEASE SEE ATTACHED PAGES.

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE
15 DEC 2005
FILE 833-6-16-8PIV

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number 295, 350, 354, 309, 209 Street address ANDERSON STREET HAMPDEN ROAD
Locality (suburb) WEST PINJARRA

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission

Peel Region Scheme
Amendment No. 012/33A
Hearing of Submissions

There will be an opportunity for people who have made written submissions to discuss matters they have raised in their submission by commenting in person to a Hearings Committee.

These hearings are arranged so that the Western Australian Planning Commission can listen to a person should they wish to explain or expand upon their written submission. In the case of a group, a spokesperson to represent the group must be appointed.

A hearing is intended for listening to points of view and planning rationale and is not a forum of general public debate.

All hearings are recorded and transcribed. The transcripts of 'private' hearings remain confidential. All written submissions, transcripts of public hearings and the Commission's report will become public documents.

You do not have to attend a hearing

The comments presented by you in this written submission will be considered.

Please complete the following (indicate by placing a tick in the appropriate box)

<input type="checkbox"/>	NO I do not wish to speak at the hearing (Please go to the end of the form and sign)
Or	
<input checked="" type="checkbox"/>	YES I do wish to speak at the hearings. (If you have indicated yes please complete the following details. You will be contacted to arrange a time for your hearing)
<u>I will be represented by</u>	
<input checked="" type="checkbox"/>	Myself. My telephone number is (business hours)
Or	
<input type="checkbox"/>	My agent or spokesperson (an agent may be from a local group)
Agent's name	
Agent's telephone number (business hours)	
Group's name	
Mailing address	
<u>I would prefer my hearing to be conducted in:</u>	
<input checked="" type="checkbox"/>	Public (with a public hearing, other persons may attend)
Or	
<input type="checkbox"/>	Private (a private hearing is conducted behind closed doors and only people nominated by you and the Hearings Committee will attend. Material presented at a private hearing will remain confidential)

To be signed by person/s making the submission

Signed R.E. Robertson Date 10-12-2005 Signed..... Date.....

Note: Submissions MUST be received by the advertised closing date, being close of business 5.00pm on Monday 19 December 2005. Late submissions will not be considered.

Contacts: Telephone 9581 4471. Fax: 9581 5491
Internet: www.wapc.wa.gov.au

History Since DHW - Some big trees
in area sold for development.

Spoken Presentation (related to landowner)

- combination factors not understood, wattle/
- rare plants / Aboriginal
- "rare plants"
- Cost : weed control
 : rubbish dumping
 :

Lands as whole

Rehabilitation

POINTS

- ① NO land or (even in Lot 295) has
been re-established. Rest is from
such areas where it is harvested.
- ② Uniqueness/world class No where else.
- ③ "Rare" plants exist

PEEL REGION SCHEME AMENDMENT NO 012/33A
ATTACHMENT TO SUBMISSION FORM

PAGE 1 OF 5

IN THE ADVERTISEMENT PLACED IN THE MANDURAH COASTAL TIMES OCTOBER 26TH 2005 UNDER PUBLIC NOTICES, THE WEST AUSTRALIAN PLANNING COMMISSION STATES THAT IN ITS OPINION THE AMENDMENT IS NOT A SUBSTANTIAL ALTERATION TO THE PEEL REGION SCHEME

BUT IT IS A SUBSTANTIAL ALTERATION TO PINJARRA & THE SHIRE OF MURRAY & NEEDS TO BE LOOKED AT IN THIS CONTEXT.

ECONOMIC BENEFIT TO SHIRE:

THE ECONOMIC RETURN FROM THIS LAND WILL BE OF FAR MORE USE TO THIS SHIRE DEVELOPED THAN IT WILL EVER BE AS BUSHLAND.

THIS RETURN WOULD COME BY WAY OF RATES TO THE SHIRE, MONEY FOR LOCAL BUSINESS & THE AREA GENERALLY I.E. SCHOOLS, SPORTING BOODS

I HAVE VISITED MANY PARKS & BUSH LANDS THROUGH OUT AUSTRALIA. THEIR ECONOMIC RETURN TO THE COMMUNITY IS VERY LOW, UNLESS THEY ARE HUGE AREAS WITH MOUNTAINS, OR GORGES, SOMETHING TO ATTRACT TOURISTS THEY CANT SEE ANY WHERE ELSE

SMALL AREAS END UP BEING FIRE HAZARDS, VERMIN SANCTUARIES, & NOXIOUS WEED INFESTED.

THEY ARE AN ADDED COST TO SHIRES FOR WEED CONTROL, FIRE CONTROL, PREVENTION OF ILLEGAL RUBBISH DUMPING

BENEFIT TO ABORIGINAL CULTURE.

IT IS MENTIONED IN THE PARADIGM REPORT ~~THE~~
PAGE NO 2 PARAGRAPH NO 3 UNDER SCOPE & CONTENT
THAT CONSERVATION VALUES OF LOT 354 ARE LIMITED
BUT COULD BE OF BENEFIT TO THE ABORIGINAL COMMUNITY
IT ALSO STATES THE LAND COULD ACCOMMODATE SOME
DEVELOPMENT ASSOCIATED WITH ABORIGINAL HERITAGE.

I PROPOSE THAT LOTS 354, 350, 309 & 299 BE
SOLD. THE MONEY RECEIVED [WHICH WOULD BE
SUBSTANTIAL] BE USED TO BUILD A VIABLE ABORIGINAL
HERITAGE / CULTURAL CENTRE ON RESERVE NO 31032
LOCATED ON SOUTH WEST HIGHWAY / AMADOR ROAD.

IT IS THE SITE REFERED TO AS WHERE THE BATTLE
OF PINJARRA TOOK PLACE DURING THE EARLY DAYS OF
WHITE SETTLEMENT

THIS WILL DO MORE FOR THE ABORIGINAL COMMUNITY
THAN A FEW ACRES OF BUSH.

THIS CENTRE WAS PROPOSED BY THE PLEB DEVELOPMENT
COMMISSION IN 1999.

MURRAY SHIRE UNFAIRLY TREATED

THIS IS ANOTHER EXAMPLE OF DIFFERENT TREATMENT
PINJARRA & THE MURRAY SHIRE RECEIVE COMPARED
TO MANDURAH, THIS IMBALANCE NEEDS TO BE
CONSIDERED FOR DEVELOPMENT TO GO AHEAD IN THIS
SHIRE.

PREVIOUS PROPOSALS REFUSED THE GO AHEAD

1. TRAFFIC COLLEGE + PERHAPS A UNIVERSITY AT FIGGERS ROAD TRANSFERRED TO MANDURAH BECAUSE OF PERCEIVED DRAINAGE PROBLEMS.
2. PRIVATE UNIVERSITY ON THE EASTERN SIDE OF THE ESTURY, NOT ALLOWED BECAUSE IT COULD DAMAGE THE ECNO SYSTEM, BUT ON THE WESTERN SIDE OF THE ESTURY DEVELOPMENT HAS GONE ON UNRESTRICTED
3. 100 YEAR FLOOD PLAIN THIS IS CAUSING MAJOR COSTS FOR HOUSE PADS SOME UP TO 1.5M.

THE EFFECTS OF THE DECISIONS NEED TO BE TAKEN INTO ACCOUNT BY THE VARIOUS GOVERNMENT AGENCIES & THE PLANNING COMMISSION BEFORE DECISIONS ARE MADE.

FUTURE DEVELOPMENT IN THE STATE

ACCORDING TO A REPORT IN THE WEST AUSTRALIAN NEWS PAPER MR MCTEIGRN HAS SAID THAT FOR FUTURE DEVELOPMENT OF RESIDENTIAL LAND 60% WILL BE ALLOWED ONLY WITHIN EXISTING CITIES, LEAVING 40% FOR THE REST OF THE STATE.

THIS SHOULD NOT BE WE NEED DEVELOPMENT AWAY FROM THE COAST & TRY & KEEP COST OF HOUSING LAND DOWN.

RARE PLANTS.

RARE PLANTS HAVE BEEN MENTIONED ON PAGE NO1 AS RARE FORA. AS ONE REASON WHY THIS LAND

SHOULD BE PRESERVED THERE ARE TO MANY EXAMPLES OF THIS WITHIN PINJARRA.

SOME PAST EXAMPLES OF RARE PLANTS BEING USED TO PREVENT DEVELOPMENT ARE,

1. THE EASTERN BY PASS AROUND PINJARRA,

MAIN ROADS NO1 OPTION NOT ALLOWED BECAUSE IT WOULD GO THROUGH A VERY SMALL AREA OF BUSH WHICH WAS SAID TO CONTAIN RARE PLANTS.

2. LAND IN PINJARRA'S LIGHT INDUSTRIAL AREA NOW CANT BE DEVELOPED BECAUSE IT IS SAID TO HAVE RARE PLANTS GROWING ON IT.

AN AREA OF LAND ADJACENT TO I.J. CANT NOT BE DEVELOPED EITHER FOR THE SAME REASON.

3. LOT 295 A BLOCK IN THE PROPOSAL CANT NOT BE DEVELOPED BECAUSE IT IS SAID TO HAVE RARE PLANTS GROWING ON IT.

WITH THESE RARE PLANTS GROWING EVERYWHERE HOW RARE ARE THEY & WHAT ARE THEY CALLED I HAVE NEVER BEEN ABLE TO FIND ANY WHERE OR ANY ONE WHO CAN NAME THEM?

LOT 295.

THIS PARCEL OF LAND WAS SOLD BY THE DEPARTMENT OF HOUSING & WORKS SOME THREE YEARS AGO. BUT IT IS STATED IN THE AMENDMENT REPORT PAGES NO1 & NO2 STARTING WITH

PARAGRAPH NO 3 IT TWICE MENTIONS THAT IT WAS KNOWN IN 1997 THAT THE LAND IS NATURAL RESOURCE PROTECTION AREA.

THIS THEN BEGS THE QUESTION WHY WAS THE LAND SOLD ? WAS IT WRONG TO SELL IT ?

FURTHER THE AMENDMENT REPORT STATES A NUMBER OF TIMES THE LAND IS IN PRIVATE OWNERSHIP.

IT NEVER MENTIONS THIS LAND WAS SOLD QUITE RECENTLY.

Reed Robertson.

14TH DECEMBER 2005.

11/08/06

Presentations

Tim Howeling
Pete Robertson (owner)
David Myerama Dysker Planning

↳ speak to your submission and
clarity submission

Issues

- Not purely scientific, need to consider what community considers regionally significant
- BUT not ignore scientific evidence
- No disagreement that pattern NOT regionally significant.
- Keightley & Tadjer Reports 1992 / Guidance 10 NOT applicable
- Current Guidelines would show More Regionally sig.

" We did not say it would
not be developed.
Our advice!!!

10

Western Australian Planning Commission Act 1985 as read in the conjunction with the Metropolitan Region Town Planning Scheme Act 1959

Peel Region Scheme Amendment No. 012/33A Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary Western Australian Planning Commission Unit 2B, 11-13 Pinjarra Road MANDURAH WA 6210

Submission number 5

I/We IFAFA PTY LTD & PJ & Y Robertson (Name) (Please print clearly)

of 25 Baker Street, PINJARRA WA Postcode 6208

Contact telephone number 08 9259 5811 Email thauweling@cornersonelegal.com.au

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

The owners of the above lot object to the inclusion of their land as Regional Open Space on the basis of a detailed submission which will be provided prior to the public hearing

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number 295 Street address Alderson Street

Locality (suburb) Pinjarra

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission

Submission form

DEPARTMENT FOR PLANNING AND INFRASTRUCTURE MANDURAH OFFICE 16 DEC 2005 833-6-16 SPV FILE

cornerstone legal

65
Lawyers
Tim Houweling
Warnar Spyker

1/300 Vahland Ave
Willetton WA 6155

Tel: 9259 5811
Fax: 9259 5866

Our Ref: TH:466
Your Ref:

Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
Mandurah WA 6210

12 December 2005

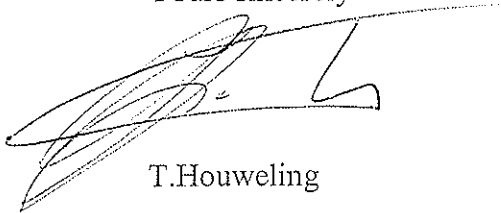
Dear Sir,

6)
Lot 295 Alderson Street, Pinjarra

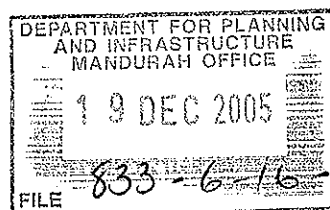
Please find enclosed a copy of our submissions in respect of the Peel Region Scheme.

We would be grateful if you could carefully consider the submission as we believe that it is likely that the Western Australian Planning Commission will make an error of law by the inclusion of this land as Regional Open Space because of environmental reasons as there is no evidence to bear this conclusion.

Yours sincerely



T.Houweling



SUBMISSION ON THE:

**PEEL REGION SCHEME AMENDMENT No. 012/33A
REGIONAL OPEN SPACE – WEST PINJARRA**

ON BEHALF OF

IFAFA PTY LTD

BY

**CORNERSTONE LEGAL
BARRISTERS & SOLICITORS
1/300 VAHLAND AVE
WILLETTON WA 6155**

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE
19 DEC 2005
FILE 833-6-16-8P.V

We act as solicitor to Ifafa Pty Ltd, Peter John and Yvonne Robertson, the owners of land described as Lot 295 Alderson Street, Pinjarra being the whole of the land contained within Certificate of Title Volume 1400 Folio 289.

The land is located approximately 1km south west of Pinjarra and is surrounded by essentially rural uses on the fringes of the urban zone. The Shire of Murray Town Planning Scheme No 4 permits a range of uses within this zone, including Chalet Park home, extracted industry, landscapes, garden centres, rural pursuits, intensive agriculture, rural industry, veterinary clinic, stables, kennels, rural produce stalls and catteries. This range of uses are permissible within the rural zone albeit the case that it is acknowledged that an application for development would be required.

The wetlands area over Lot 295 was originally identified in the Wetlands of the Swan Coastal Plain Volume 2B Wetland Mapping Classification and Evaluation Wetland Atlas of Hill, Semeniuk, Semeniuk and Del Marco.

The purpose for which the land is included within a wetland by the Department of Environment is based on the mapping carried out for the Wetlands of the Swan Coastal Plains Mapping. This mapping was a broadbased approach to mapping of wetlands and for that reason the Department of Environment has a specific policy relating to wetlands which provides a protocol by which the wetlands categories are able to be reviewed.

Additionally, errors have been found within the Wetlands of the Swan Coastal Plain evaluation carried out by Hill, Semeniuk, Semeniuk and Del Marco because of the translation of the materials, the collection of evidence by untrained experts and the process by way of GIS for the inclusion of any area considered to be wetland into the geomorphic data set held by the Department of Environment. The Department of Environment holds a data set which could not be relied upon as being clear evidence of what exists on the ground. Pursuant to the protocol attached hereto as **Annexure 1**, the Department of Environment proponent is able to have the Department of Environment review the geomorphic dataset.

The land owners have had two environmental reviews carried out over the land by:

1. Mr Lindsay Stephens, an environmental consultant of Landform Research;
2. Dr Vic Semeniuk, a nationally renowned and recognised wetlands expert and author of the Wetlands of the Swan Coastal Plains Policy.

Both Semeniuk and Stephens agree to the wetland on the western boundary, however Dr Semeniuk identifies further areas of wetlands contained within his report at Figure Two.

There seems to be little doubt that the wetland within the western area could be considered to be regionally significant. Dr Semeniuk considers that

wetland number 1, 2, and 4 in Figure Two of his wetlands report, are regionally significant wetlands.

It is evident in reliance on reports by Lindsay Stephens from Landform Research as well as Dr Semeniuk, that the inclusion of the whole of the Lot 295 Alderson Street within the Region Scheme for the purposes of wetlands, cannot be borne out or supported by the analysis on the ground.

The land owners for that reason seek a review of the inclusion of their land as Regional Open Space for the purposes of wetlands. It should be noted that any area included in a Region Scheme must be done on the basis of purposes for which the scheme can be created. Areas which are not environmentally significant or have no particular regional features ought not to be included within a Regional Town Planning Scheme for the purposes of a reservation. In the event that the Western Australian Planning Commission decides to include those areas within the Region Scheme for the purposes of reservation on the basis of environmental considerations and there is no evidence to support this inclusion, it is open to our clients to seek review from the Supreme Court by way of Writ of Certiorari.

Quite clearly this is not the preferred option. Whereas our clients are prepared to have areas of their land considered to be Regional Open Space, they would wish to do so by way of negotiated planning solutions whereby the balance of the land is zoned for urban development.

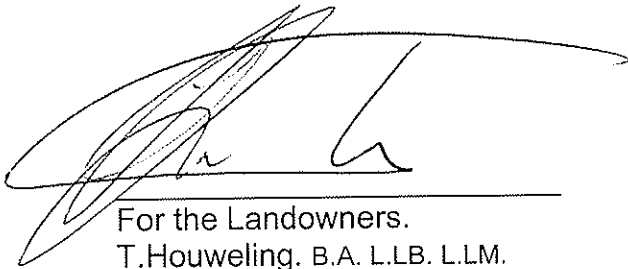
Those areas which are considered to be regionally significant wetlands could be included within the Peel Region Scheme, however those areas outside of regionally significant wetlands ought not to be included within the Peel Region Scheme as areas of land that are reserved.

Additionally it should be noted that this land was sold by the Department of Housing & Works concealing the fact that it was or may have been considered to be environmentally significant land at the time of the sale.

At the hearing we reserve the right to present further evidence as a result of our Freedom of Information request on the Department of Planning & Infrastructure as well as the Shire of Murray. By way of this written submission we simply wish to present to the Committee the position that the land owners do not consider the whole of their land to be regionally significant for the purposes of inclusion in the region scheme. The basis on which the whole of the land is being proposed to be included within the region scheme is not borne out by the evidence. Additionally there has not been any detailed on site assessment of the land beyond that done by Mr Lindsay Stephens of Landform Research and Dr Vic Semeniuk.

Bearing in mind that the geomorphic dataset requires validation and verification which has now taken place, to include the whole of Lot 295 within the region scheme for the purposes of a reservation on the basis of the land being regionally significant from an environmental stand point, would amount to an error of law reviewable by the Supreme Court.

Our clients will be making submissions to the Committee for further consideration in respect of matters. For that reason we would require more time than simply a brief hearing to enable all of the issues to be properly ventilated and considered by the Committee.

A handwritten signature in black ink, appearing to be 'T. Houweling', written over a horizontal line.

For the Landowners.
T.Houweling. B.A. L.L.B. L.L.M.
Barrister & solicitor

Water and Rivers Commission

Position Statement: Wetlands



This position statement has been prepared by the Water and Rivers Commission for Wetlands of the Swan Coastal Plain, and provides the Commission's views on related issues (dated 6/6/01).

Background: Wetlands not only include lakes with open water but areas of seasonally, intermittently or permanently waterlogged soil. Approximately 25% of the Swan Coastal Plain between Moore River and Mandurah is classified as wetland. Though extensive in area, not all wetlands retain significant ecological values due to the concentration of urban and agricultural development in the region. Most wetlands have been either cleared, filled or developed over, leaving only 20% of all the wetlands that were present on the Swan Coastal Plain prior to European settlement. Of these, an estimated 15% of the wetland area has retained high ecological values. These are conservation category wetlands.

The Commission's position is that conservation category wetlands are accorded the highest priority for protection and conservation.

Context: This statement has been prepared to clarify the Commission's position on the management and protection of wetlands of the Swan Coastal Plain and how this relates to development in the region. The following information should be read in the context of ecologically sustainable development consistent with the principles outlined in the State Wetland Conservation Policy (1997) and environmental best management practices.

Wetlands Defined: For consistency with the Wetland Conservation Policy for WA (1997) and the Ramsar Convention (UNESCO 1971), the Commission has adopted the following definition for wetlands: *areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth to which at low tide does not exceed six metres.* However, the provisions of this statement, limited in their extent of reference to the Swan Coastal Plain, only apply to dampland, sunpland, lakes, floodplain and paluspland wetlands. It excludes constructed wetlands.

Wetland Type: A classification system developed by the Semeniuk Research Group was employed for wetland classification on the Swan Coastal Plain (Hill *et al.* 1996). This system classifies wetlands based on landform and water permanence, the various types of which are presented in the table below.

Wetland Type	General Description
Basin Wetlands	Dampland = seasonally waterlogged basin. Sunpland = seasonally inundated basin. Lake = permanently inundated basin. Artificial basins (e.g. dams, reservoirs).
Flat Wetlands	Floodplain = seasonally inundated flat. Paluspland = seasonally waterlogged flat.

Wetland Evaluation and Management: Wetland evaluation is the process of assessing the level of significance of a wetland (see Hill *et al.* 1996). An appropriate management category is assigned to the wetland based on the evaluation, which provides guidance on the nature of the management and protection the wetland should be afforded (see table below).

Management Category	General Description	Management Objectives
C - Conservation (incorporates EPA Bulletin 686 categories II and C)	Wetlands support a high level of ecological attributes and functions.	Highest priority wetlands. Objective is preservation of wetland attributes and functions through various mechanisms including: <ul style="list-style-type: none"> • reservation in national parks, crown reserves and State owned land, • protection under Environmental Protection Policies, and • wetland covenanting by landowners. These are the most valuable wetlands and the Commission will oppose any activity that may lead to further loss or degradation. No development.
R - Resource enhancement (incorporates EPA Bulletin 686 categories O and R)	Wetlands which may have been partially modified but still support substantial ecological attributes and functions.	Priority wetlands. Ultimate objective is for management, restoration and protection towards improving their conservation value. These wetlands have the potential to be restored to conservation category. This can be achieved by restoring wetland structure, function and biodiversity. Protection is recommended through a number of mechanisms.
M - Multiple use (aligned with EPA Bulletin 686 category M)	Wetlands with few important ecological attributes and functions remaining.	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through landcare. Should be considered in strategic planning (e.g. drainage, town/land use planning).

Wetland Database Custodianship: The Commission is the primary custodian of the State's wetland mapping database which includes extensive and detailed mapping of wetlands on the Swan Coastal Plain. The Commission's wetland database is recognised as the most accurate and up to date reference for wetland mapping on the Swan Coastal Plain. The wetland mapping on the Commission's database, which incorporates wetland evaluation (management) categories, should be consulted for all wetland queries.

Wetland Re-evaluation: The Commission acknowledges that the database, while the most accurate store of wetland spatial information available, cannot be 100% accurate because of the inherent difficulties involved in monitoring all wetlands for changes over time. Therefore, the Commission allows wetlands to be reassessed if an evaluation category is in genuine dispute. A Commission endorsed assessment protocol is available and must be followed by proponents reassessing wetland management categories.

Wetland Management Requirements: There is a presumption against approving any activity likely to impact on priority management wetlands, including developments that are likely to require, cause, or result in the following: filling, clearing, mining, drainage into or out of, effluent discharge into, pollution of, and degradation to the wetland. Adequate buffers should be applied according to the principles outlined below. The Commission's position on conservation category wetlands is no development.

Wetland Buffers and Land Use

Buffers are designed to protect wetlands from potential deleterious impacts while helping safeguard and maintain ecological processes and functions within the wetland and, wherever possible, in the buffer. Buffers also act to protect the community from potential impacts such as nuisance midge problems. Buffer distances are measured from the outside extent of wetland dependant vegetation to the outside edge of any proposed development or activity. The required buffer distances for wetlands depend on the land use, 50 metres being the minimum buffer distance applied. For a guide to the Commission's wetland buffer requirements for a range of land uses on the Swan Coastal Plain (Davies and Lane 1995) refer to the table presented below.

Purpose of Buffer	Land Use Example	Recommended Buffer Width*
Reduction of impact of nuisance insects on residents (e.g. midges).	Residential housing.	800-1,000 m depending on orientation of wetland.
Protection from nutrient inputs.	Market garden.	200 m on transmissive soils, 100 m on non-transmissive soils.
Protection from pollution (e.g. petroleum hydrocarbons, surfactants)	Mechanical workshop.	200 m.
Protection from heavy metal contamination.	Mineral processing operation.	200 m.
Protection from pesticide drift.	Orchard.	200 m.
Reduction of sedimentation	Timber harvesting operation.	100 m.
Protection of groundwater quality.	Agricultural composting facility.	2,000 m in direction of groundwater flow for transmissive soils
Protection of avifauna nesting and roosting sites.	Residential housing.	200-800 m.
Protection from weed infestation.	Residential housing.	50-100 m.
Maintenance of natural water levels.	Vineyard.	200 m but dependant on water extraction.

*Buffer width recommendations may be varied at the discretion of the Commission as new data becomes available. Guidance on the Commission's buffer recommendations is received from the State Wetland Coordinating Committee sub-committee on wetland buffers.

Land Use Compatibility

As a general rule, wetland management categories are regarded as equivalent to the States public drinking water source protection areas. Therefore, the wetland management categories of conservation, resource enhancement and multiple use correspond to water source protection areas Priority 1 (P1), Priority 2 (P2) and Priority 3 (P3) respectively, in terms of land use compatibility (Water and Rivers Commission 2001).

Existing and Proposed Activities

The Commission recognises that many activities were established prior to the introduction of this statement. However, this is not considered justification for establishing new or expanding existing land use activities that are incompatible with the wetland management objectives. Proposed activities are required to be compatible with the management requirements of any wetlands that the land use may impact.

For more information contact the Wetlands group, Catchment and Waterways Branch, Policy and Planning Division.

References

- Davies, P. M. and Lane, J. A. K. (1975) *Guidelines for design of effective buffers for the Swan Coastal Plain*. Report to: Australian Nature Conservation Agency, Canberra.
- Government of Western Australia (1997) *Wetland Conservation Policy for Western Australia*. State Government Publisher, Perth.
- Hill, A. L., Semeniuk, C. A., Semeniuk, V. and Del Marco, A. (1996) *Wetlands of the Swan Coastal Plain*. Volume 2A. Water and Rivers Commission, Perth.
- UNESCO (1971) Article 1, part 1, *Convention on wetlands of international significance*. Published in Australia in 1976 for the Department of Foreign Affairs. Australian Government Publishing Service, Treaty Series 1975, No. 48.
- Water and Rivers Commission (2001) *Land use compatibility within Public Drinking Water Source Areas*. Water and Rivers Commission, Perth.

V & C Semeniuk Research Group

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7th December 2005

Mr T Houwelling
Cornerstone Legal
1/300 Vahland Ave.,
Willeton, W.A., 6230

Letter report on the wetlands, Lot 295 Alderson Street, Pinjarra

Dear Tim

Thank you for inviting the V & C Semeniuk Research Group (VCSR) to carry out an assessment of wetlands in the area Lot 295 Alderson Street, Pinjarra (Deposited Plan 180633, Certificate of Title 1400 Folio 289). To carry out the instructions in your letter, I have undertaken out a field survey (on site analysis) of the Lot, and also conducted a desk study to determine whether or not the whole of the site would be considered a wetland, or whether only a portion could be considered a wetland.

In this study, for the field survey, I visited Lot 295 and described and assessed the land under question, described and assessed the vegetation and soils therein, determined where the water table was located relative to the surface, collected soils for laboratory studies, and collected moist soil samples for determining moisture content. In the laboratory, and at the office, I processed the soil samples to determine moisture content by oven drying, and examined under a microscope and photographed the soils that were collected to determine their biogenic wetland features. The desk study involved examining the documentation in relation to Lot 295, reviewing the Water & Rivers Commission Atlas on wetlands for the region, and reviewing our own VCSR in-house R&D data.

This letter report is structured as follows:

- 1.0 Background information
- 2.0 Description of the regional landscape
- 3.0 Description of Lot 295 landscape
- 4.0 Wetlands in Lot 295
- 5.0 Soil and water details of the wetlands in Lot 295
- 6.0 Assessment of Lot 295
- 7.0 Discussion and Conclusions
- 8.0 References

Note that this was not a comprehensive botanical study, and hence the flora noted here is not an exhaustive list. Rather, it is intended to show the diagnostic species that inhabit the wetland. Further, in the time available for fieldwork, priority was set on mapping the wetlands, and not on finding Priority species or Rare and Endangered plant species.

1.0 Background information

The Western Australia Planning Commission is intending to carry out minor amendments to the Peel Region Scheme by including Lots 295, 350 and 354 Alderton Street, amongst other lots, into the Regional Open Space reservation system. In detail Lot 295 will be transferred from Rural Zoning to Regional Open Space Reservation.

In the Inner Peel Region Structure Plan, 1997, the subject land is classified as Natural Resource Protection - Subject to further study, a classification that applies to areas of bushland in good condition that require further studies to determine appropriate mechanisms for their protection. Further examination of the subject land had taken place, which included a detailed wetland and vegetation assessment of Lot 295 and a review of the conservation values of the overall area by the Department of Planning and Infrastructure in consultation with the Department of Conservation and Land Management and Department of Environment. In this context, because of the quality and range of the vegetation in both upland and wetland areas, and the presence of rare significant and rare flora, the terrain was assessed as having local and regionally significant remnant vegetation.

In this context, it appears that the natural history attributes that have been important in assessing Lot 295 as significant are:

1. remnant upland and wetland within a region that is largely cleared
2. quality and range of upland and wetland vegetation in Lot 295
3. presence of a conservation category wetland within Lot 295
4. presence of significant and rare flora

The wetland maps presented in Volume 2B of the Water & Rivers Commission Atlas do not cover this area of Lot 295.

2.0 Description of the regional landscape

The region of Lot 295 is located in the geomorphic setting of the Pinjarra Plain of McArthur & Bettenay (1960) and in the Keybrook Suite of wetlands of C A Semeniuk (1988). This region is composed of a nearly flat to low undulating land surface underlain by sand, muddy sand, locally mud, and ironstone. The water table, where there are no drains, is often close to the ground surface, and as a result there are numerous wetlands. Using terminology of C A Semeniuk (1987), these are palusplains (seasonally waterlogged or moist plains), damplands (seasonally waterlogged or moist basins), and sumplands (seasonally inundated basins).

Throughout the region, there has been extensive clearing for agriculture, and as such, the local area of Lot 295 and its adjoining terrain supports an isolated patch of remnant vegetation (Figure 1).



Figure 1: Lot 295, with remnant native vegetation (circled) in the Pinjarra region

3.0 Description of Lot 295 landscape

Lot 295 is a trapezoid block of land, some 300 m x 300 m in size. The natural terrain of Lot 295 comprises low undulating landscape, consisting of low sand hills and wetlands. Overall, relative relief is low. The terrain mostly consists of dryland (the low sand hills), vegetated by *Allocasuarina fraseriana* (the sheoak formerly known as *Casuarina*, *Eucalyptus marginata* (the jarrah), *Corymbia calophylla* (the marri), *Banksia attenuata*, *Banksia ilicifolia*, *Jacksonia furcellata*, *Macrozamia riedlei* (the zamia palm), *Xanthorrhoea preissii* (the grass tree).

Numerous tracks traverse Lot 295, and along its northern and northeastern margin there is a straight to curving drain (inhabited by *Typha orientalis* and *Carex*). Locally, in patches some 50 m x 20 m in size, the terrain has been cleared and invaded by weeds.

4.0 Wetlands in Lot 295

There are four wetlands on Lot 295 (Figure 2), that are either complete wetlands, or parts of wetlands that, while occurring on Lot 295, are actually mainly located outside the Lot. These are notated as Wetland # 1, Wetland # 2, Wetland # 3, and Wetland # 4 (Figure 2). All the wetlands are basins, and relative to the water table, they are classified as damplands (seasonally waterlogged) or sumplands (seasonally inundated), following the terminology of C A Semeniuk (1987).

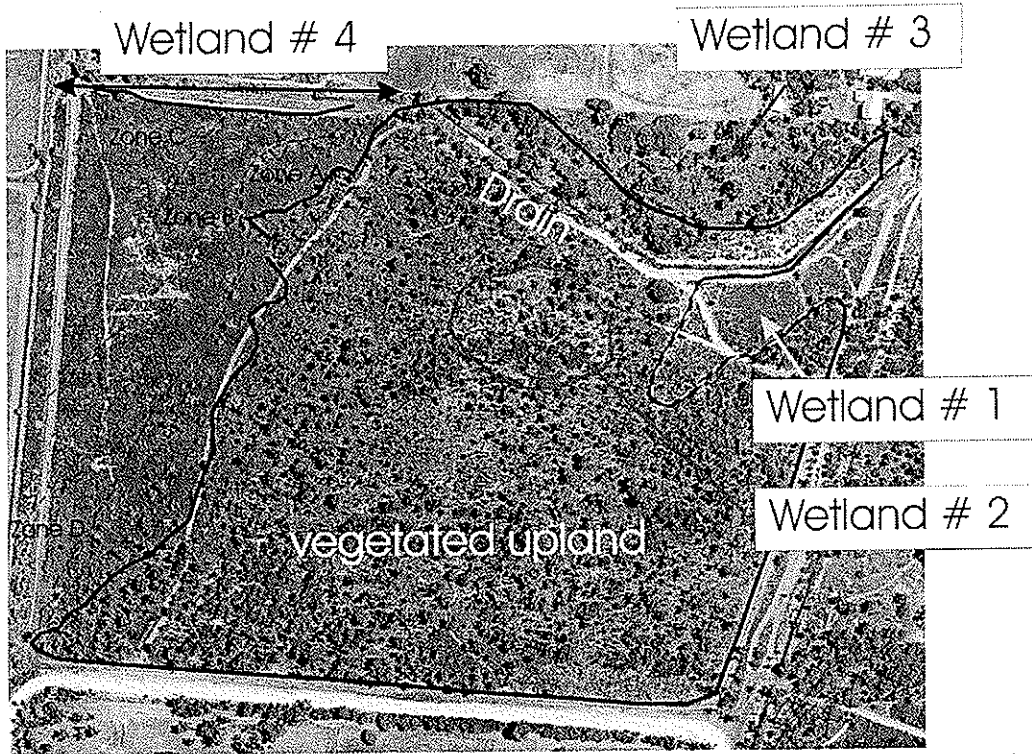


Figure 2: Annotated aerial photograph of Lot 295 showing location of the four wetlands, the vegetation zones in Wetland # 4, the extent of the upland vegetation, and the nature of the terrain traversed by a drain to the north and tracks throughout

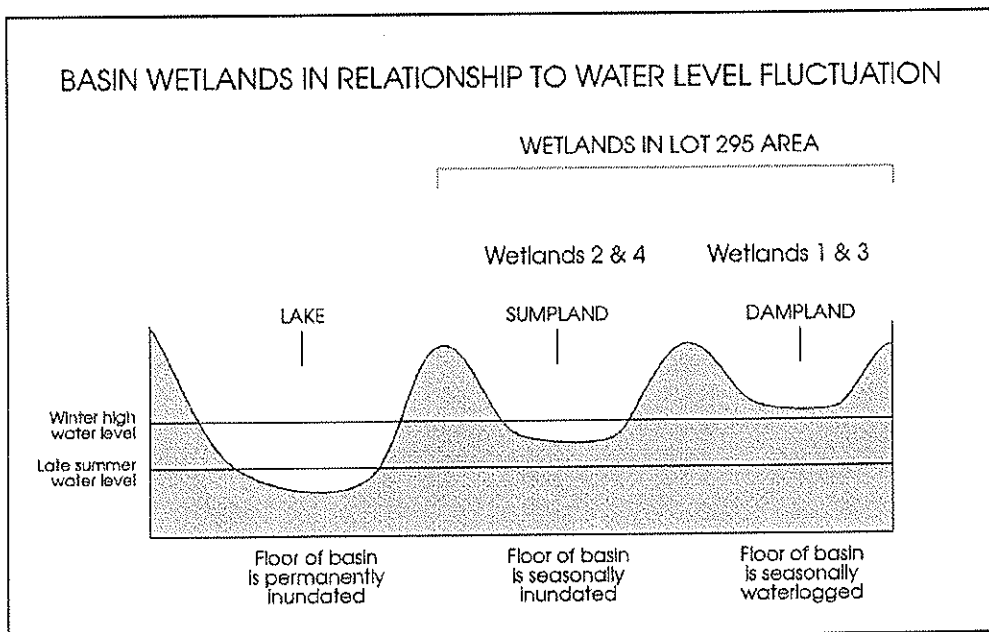


Figure 3: Wetland classification - nomenclature of basins with respect to their hydrological regime in relation to a fluctuating water table (after C A Semeniuk 1987)

Wetland # 1 is a medium sized elongate vegetated dampland, c. 200 m long and 50 m wide, trending northeast, in the northeast of Lot 295. It extends into the adjoining Lot; hence only part of the total wetland is on Lot 295. The wetland is underlain by humic quartz sand. The vegetation inhabiting the wetland consists of low open heath and sedgeland of *Pericalymma ellipticum*, *Dasypogon bromellifolia*, *Hakea varia*, with *Stylidium* sp, *Gompholobium*, *Stirlingia latifolia*, with some scattered *Jacksonia furcellata*. *Pericalymma ellipticum* in this assemblage is the key species that indicates wetland conditions.

Wetland # 2 is a small circular forested sumpland, c.100 m diameter, in the central northern part of Lot 295. The wetland is underlain by humic quartz sand and peaty sand. The wetland consists of closed forest of *Melaleuca pressiana*, *Kunzea ericifolia*, *Corymbia calophylla*, with a low open heath and sedgeland understory consisting of floristic elements similar to Wetland # 1. *Melaleuca pressiana* is indicative of wetland conditions.

Wetland # 3 is a medium sized forested dampland, c.200 m in (sectorial) size, along the northern boundary Lot 295; only the southern sectorial margin of the wetland occurs in Lot 295. This wetland margin is underlain by humic quartz sand. *Melaleuca pressiana* is indicative of wetland conditions. This wetland margin is inhabited by an open forest to woodland of *Melaleuca pressiana*, with understory of *Allocasuarina fraseriana*, *Xanthorrhoea preissii*, *Hypocalymma angustifolia* and *Dasypogon bromellifolia*. *Melaleuca pressiana* in this assemblage is the key species that indicates wetland conditions.

Wetland # 4 is a large vegetated sumpland, c.300 m long along the western part of Lot 295. The wetland is only partly present on Lot 295, and the remainder is cleared and on adjoining Lots to the northeast and west of Lot 295. The wetland is underlain by humic sand in its drier parts along the eastern margin, and by muddy and peaty sand in its wetter parts. Vegetatively, it is more complex than the other three, and is zoned, with a peripheral transitional zone (Zone A) on its eastern margin, a low heath to sedgeland (Zone B) on the inside of Zone A, a heath (Zone C) in one of its the wettest parts, and a heath/woodland (Zone D) in its other wettest part. Zone A is similar in vegetation to Wetland # 1 (viz., low heath/sedgeland of *Pericalymma ellipticum*, *Dasypogon bromellifolia*, *Hakea varia*) but additionally with *Anarthria* sp, *Leptospermum longitudinale*, and other sedges, and scattered trees of *Melaleuca pressiana* and *Corymbia calophylla*. Zone B is low heath of *Pericalymma ellipticum* with emergent *Viminaria juncea* and *Melaleuca pressiana*. Zone C is *Melaleuca viminea* closed heath 0.5-1.0 m high. Zone D is medium heath of *Melaleuca incana*, *Astartea facicularis*, *Leptocarpus* spp and other sedges, and overstorey of *Melaleuca pressiana*. The species *Pericalymma ellipticum*, *Melaleuca pressiana*, *Melaleuca viminea*, *Viminaria juncea*, *Melaleuca incana*, *Astartea facicularis*, *Leptocarpus* spp, *Anarthria* sp, and *Leptospermum longitudinale* in this assemblage are the key species that indicate wetland conditions.

5.0 Soil and water details of the wetlands in Lot 295

Water table level, water moisture content, and wetland soil features were examined in wetlands 1, 2 and 4. Soil moisture in mid November 2005, and surface moisture content in the mid margin and southern part of Wetland # 4 in late November 2005 are presented in Table 1 below. Other relevant information on the wetlands is presented in Table 2 below. Figure 4A shows sponge spicules. Sponge spicules are particularly important as wetland indicators in that sponges require inundation, showing that the soil in which they are now occur has been inundated at some time recently (either seasonally, each year, or in the past 10-20 years in response to medium term climatic fluctuations). Figure 4B shows the phytoliths (silica inclusions in plant tissue that remains as residues after the decay of the plants) derived from wetland sedge plants; that in this case, are those occurring in the soil of Wetland # 1. The phytoliths indicate that there has been seasonal waterlogging, or at least waterlogging sometime in the recent past (say, 10-20 years ago, in response to medium term climatic fluctuations).

Table 1: Soil moisture (%) in the wetlands in Lot 295

Site and sample depth	% moisture	soil type	depth to water table
Wetland # 1: 0-10 cm	9.4	humic sand	
Wetland # 1: 20 cm	11.4	sand	
Wetland # 1: 30 cm	15.1	sand	
Wetland # 1: 40 cm (at water table)	20.2	sand	40 cm
Wetland # 2: 0-10 cm	37.9	peaty sand	
Wetland # 2: 20 cm	10.6	sand	
Wetland # 2: 30 cm	18.9	sand	
Wetland # 2: 40 cm (at water table)	22.7	sand	40 cm
Wetland # 4 (east margin): 0-10 cm	10.2	humic sand	
Wetland # 4 (east margin): 30 cm	7.1	sand	40 cm
Wetland # 4 (south): 0-10 cm	29.0	muddy sand	30 cm

Table 2: Information on the wetlands 1, 2 and 4 in Lot 295

Wetland	depth WT Nov 2005	phytoliths	sponges	implications
1	40 cm	sedges	no	water table depth in November indicates that the wetland would have been moist with high water table levels in winter; phytoliths show prevalent wetland plants
2	40 cm	sedges	yes	water table depth in November indicates that the wetland would have been moist with high water table levels in winter; sedge phytoliths indicate wetland plants are prevalent; sponge spicules indicate the wetland has been periodically inundated
4	30 cm	sedges	yes	water table depth in November indicates that the wetland would have moist soil with high water table levels in winter; phytoliths indicate wetland plants are prevalent; sponge spicules indicate that the wetland has been periodically inundated

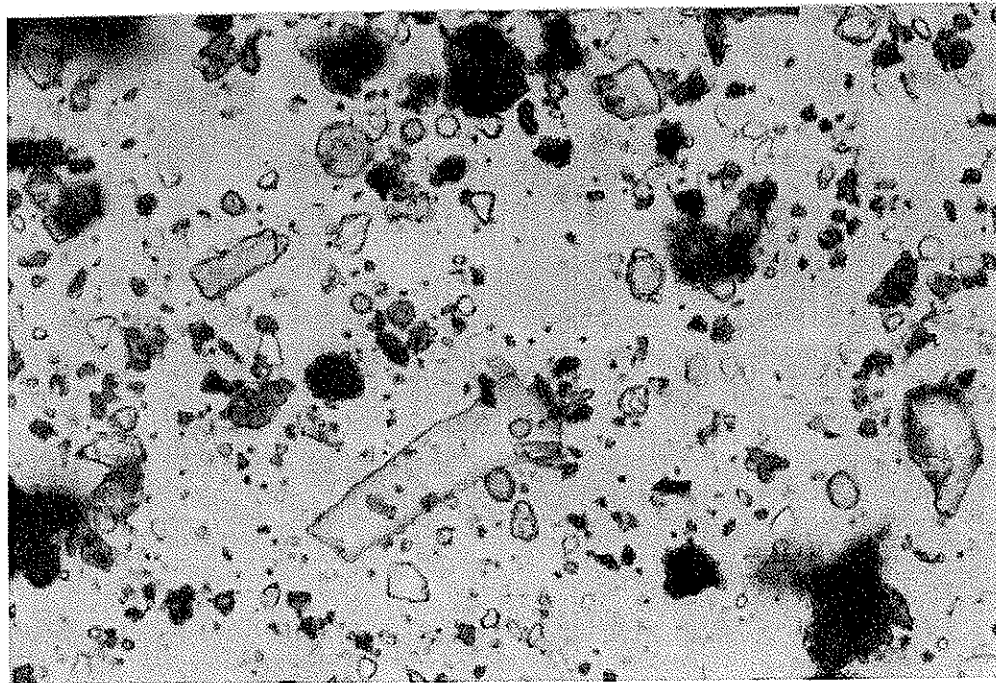
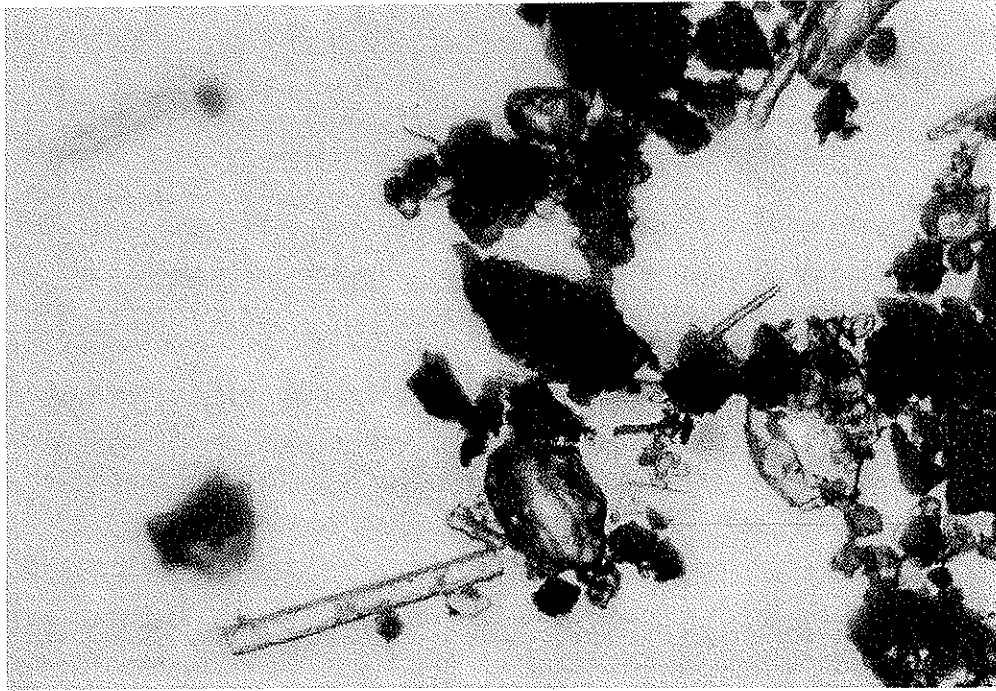


Figure 4: A (upper photograph) is soil under the microscope, from Wetland # 2, showing dark grains (organic matter), round/ovoid glassy grains (quartz sand), and glass-like rod (sponge spicule). B (lower photograph is soil from Wetland # 1, showing abundance of phytoliths (speckling of grains throughout the view).

7.0 Assessment of Lot 295

Lot 295 has a drain and numerous tracks traversing it. In addition, there are patches within the Lot that are invaded by weeds. However, for the larger part of its area, Lot 295 has remnant upland and wetland vegetation in relatively good condition.

8.0 Discussion and Conclusions

The main conclusions deriving from this survey are as follows:

1. on criteria of vegetation, depth to water table in November, soil moisture and soil particles, four wetlands are recognised as occurring on Lot 295;
2. these wetlands cover *c.* 45% of the area of Lot 295;
3. wetlands # 1, # 2 and # 4 have wetland vegetation in relatively good condition;
4. each wetland in Lot 295 is different in terms of its vegetation/floristic composition;
5. the upland vegetation is mainly jarrah, marri, sheoak assemblage;
6. the upland vegetation is variable in condition, but largely in relatively good condition.

In the context of your letter, with a request as to identifying which portions of the land are significant, I proffer the following. Wetlands # 1, # 2 and # 4 are regionally significant, as they are remnants of these types of wetlands in a region that is now largely cleared. Protection of these wetlands would require a buffer zone, which depending on details of intended land-use would range in width from 50 m to 200 m. Portions of upland terrain that have been partly cleared and that are partly invaded with weeds are not regionally significant. The wetland to the north, viz., Wetland # 3 also is not regionally significant.

9.0 References

McArthur W M & Bettenay E 1960 The development and distribution of soils of the Swan Coastal Plain, Western Australia. CSIRO Soil Publication No 16.

Semeniuk C A 1987. Wetlands of the Darling System - A geomorphic approach to habitat classification. *Journal of the Royal Society of Western Australia* 69: 95-111.

Semeniuk C A 1988. Consanguineous wetlands and their distribution in the Darling System, southwestern Australia. *Journal Royal Society Western Australia* 70: 95-111.

I trust that this letter report is to your satisfaction.

Yours sincerely,

Dr V Semeniuk
Director, VCSRG

Wetland Assessment, Lot 295, Alderson Street Pinjarra

Introduction

25 February 2004

This wetland and vegetation assessment of Lot 295, Alderson Street, Pinjarra was undertaken to assess the potential of the site for a subdivision.

A Subdivision Guide Plan, prepared by Dykstra and Associates, shows the site to be subdivided into 2.0 hectare lots. The subdivision was planned to be able to accept an overlay plan at the local authority request.

The site was previously owned by the Crown and sold to the current owners approximately 2 years ago.

A wetland has been nominated on the site and this report was to determine the significance of the wetland and suggest how the wetland may be able to be fitted into the Subdivision Guide Plan.

Studies of the vegetation were made on 15 July 2003, 20 November 2003 and 6 December 2003 by Lindsay Stephens to assess the vegetation and delineate the wetland, and search for Rare and Priority flora. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003 flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

The lot lies to the west of Pinjarra townsite in an area of proposed urban expansion.

Geomorphology and Hydrology

Lot 295 lies on the eastern side of the Pinjarra Plain. The site is flat with an elevation varying by only a few metres, dropping from east to west.

The soils on site are exposed in a central drain, and are sands in the eastern two thirds, overlying clays of the Guildford Formation. In the western third the Guildford Formation is exposed and this reduces vertical permeability of the soils.

The site is well drained in the eastern and central sandy areas, but has reduced drainage in the west. A drain runs along the northern boundary, diverging into the central north east of the site.

The wetter western area is subjected to shallow ground water in winter with water collecting due to restricted lateral and vertical drainage. At the time of the site inspection surface water had begun to lay on the surface. Following winter, water will evaporate, be transpired, and perhaps slowly infiltrate to the subsoils.

Vegetation

Introduction

Studies of the vegetation were made by Lindsay Stephens.

Lot 295 was extensively walked and the plant species identified. The vegetation studies were completed in winter (15 July 2003) and spring (20 November 2003 and 6 December 2003), with the spring study on 20 November 2003 conducted at a time when the wetland species appeared to be at their peak.

Prior to the spring surveys the CALM and WA Herbarium databases were searched and published references checked to assist field observations. Specimens that showed similarities to those on the CALM and Herbarium databases, and specimens not readily identified, were checked against the WA Herbarium reference collection.

The vegetation is partially disturbed across the site, with the edges subject to exotic and weed species incursions. In other parts the vegetation is in Good to Excellent Condition.

Communities

Five vegetation communities are identifiable. These are not quite typical communities of the Swan Coastal Plain because of their small size and transitional nature.

The vegetation communities are;

- *Banksia* Woodland in the centre and east. This contains scattered patches of *Melaleuca* Woodland.
- *Kunzea ericifolia* Thicket in a small area on the eastern boundary, probably originating from disturbance.
- *Melaleuca* Woodland in scattered patches across the site, and the south western corner.
- *Pericalymma elipticum*, *Hypocalymma angustifolium* Heathland as a transition between the wetter Myrtaceous Shrubland and the *Banksia* Woodland
- Myrtaceous Shrubland along the western boundary in the wetter areas.

Banksia Woodland

This varies across the site with the larger and understorey species changing in their frequency and presence.

The overstorey is dominated by *Banksia attenuata*, *Banksia ilicifolia*, *Allocasuarina fraseriana* *Eucalyptus calophylla* and occasional *Melaleuca preissiana*. Under this are taller shrubs of occasional *Kunzea ericifolia*, *Adenanthos cygnorum*, *Melaleuca thymoides*, *Jacksonia*, *furcellata*, *Philothea spicata*, and occasional *Hakea lissocarpha*.

The understorey contains common species such as *Xanthorrhoea preissii*, *Gompholobium tomentosum*, *Melaleuca incana*, *Bossiaea eriocarpa*, *Phlebocarya ciliata*, *Jacksonia sericea*, *Nuytsa floribunda*, *Daviesia decurrens*, *Verticordia sp*, *Petrophile linearis*, *Stirlingia latifolia* and *Acacia pulchella*.

Ground covers include *Patersonia occidentalis*, *Burchardia spp*, *Acacia pulchella*, *Damperia linearis*, *Dasypogon bromelliifolius*, and *Conostylis caricina*, *Conostylis aculeata*, *Opercularia hispidula*, *Phyllanthus calycinus*, *Lepidosperma angustatum*, *Drosera erythrorhiza*, *Stylidium brunonianum*, *Phlebocarya ciliata*, *Brachyscome pusilla*, *Pterostylis vittata*, *Drosera pallida*, *Patersonia occidentalis*, *Hardenbergia comptoniana*, *Lagenophora huegelii*, *Caladenia sp*, *Acacia pulchella*, *Acacia sessilis*, *Xanthorrhoea gracilis*, *Hibbertia huegelii*, *Lyginia barbata*, and *Desmocladius fascicularis*,

This community is most like Community Type 21a and is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994, *A Floristic survey of the southern Swan Coastal Plain*, Unpublished Report for the Australian Heritage Commission, prepared by Department of Conservation and Land Management and Conservation Council of Western Australia Incl).

***Kunzea ericifolia* Thicket**

This is dominated by a thicket of *Kunzea ericifolia*, with reduced understorey and some groundcovers. Ground covers in this vegetation are dominated by species from the Banksia Woodland and the lower communities, such as *Phlebocarya ciliata*. Annual species are often present, but in July it was a little early to search for these. The understorey and ground cover of this community is dominated by lower elevation Banksia Woodland and therefore this community is not classified as a wetland.

This community is most like Community Type 21c (Gibson et al, 1994) being lower in the landscape and thus located on moister soils of Bassendean Sands.

***Melaleuca* Woodland**

This consists of gradational species between Banksia Woodland. The dominating vegetation is scattered *Melaleuca preissiana* over shrub and groundcover vegetation of lower elevation Banksia Woodland.

This community is also best listed as a type of Community Type 21c (Gibson et al) being located in small depressions of the sand ridge and thus located on moister soils of Bassendean Sands. *Melaleuca preissiana* is common in Community Type 21c, but on the basis of the ground and understorey species it is not classified as wetland.

***Pericalymma ellipticum* - *Hypocalymma angustifolium* Heathland**

Pericalymma ellipticum, *Hypocalymma angustifolium* Heathland occurs as a transition between the wetter Myrtaceous Shrubland on the western boundary and Banksia and *Melaleuca* Woodland. Both *Pericalymma ellipticum* and *Hypocalymma angustifolium* form a dominant feature of the community which also contains species such as *Jacksonia lehmannii?*, *Acacia pulchella*, *Xanthorrhoea preissii*, *Dasypogon bromelliifolius*, *Burchardia umbellata*, *Hakea varia*, *Hypolaena exsulca*, *Jacksonia sericea*, *Melaleuca incana*, *Acanthocarpus canaliculatus*, *Ottelia ovalifolia*.

This community has elements of Community Types 8, 9 and 10a, Gibson et al, 1994. Gibson et al 1994 list all three Community Types as Well Reserved, Vulnerable.

Myrtaceous Shrubland along the western boundary in the wetter areas.

The Myrtaceous Shrubland occurs along the western boundary where surface waterlogging occurs in winter. Species similar to those in the *Pericalymma ellipticum*, *Hypocalymma angustifolium* Heathland, but species more suited to slightly wetter conditions enter the community and others drop out. Some additional species are *Melaleuca viminea*, *Melaleuca lateritia*, *Astartea fascicularis* and *Lepidosperma longitudinale*.

This community forms a transitional community between *Pericalymma ellipticum*, *Hypocalymma angustifolium* Heathland and the Banksia Woodland. It is probably best listed as a type of Community Type 21c (Gibson et al) being located on the lower western edge of the sand ridge and thus located on moister soils of Bassendean Sands.

There was evidence of bandicoots in this vegetation community.

Community Significance

The site was assessed by Keighery B, and M Trudgen, 1992, Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain, Department of Conservation and Land Management.

The site was listed as the "Cole Street", Site 39, Pinjarra. Keighery and Trudgen recommended that the site, which included the land to the east, be regarded as a possible conservation area. They also listed the site as being in private ownership.

Department of Conservation and Land Management, 1980, Atlas of Natural Resources, Darling System, Western Australia, list the site as Vegetation Complex 32 Guildford Complex.

EPA Guidance for the Assessment of Environmental Factors, No 10, Levels of assessment for proposal affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region (January 2003) lists the Guildford Complex as having only 5% remaining of which 143 hectares is in secure tenure, which represents 0.2% of the pre 1750 extent of vegetation.

Community Type 21a is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994).

Whilst Bush Forever considered only the Perth Metropolitan area, Gibson et al considered the vegetation communities of the Swan Coastal Plain. Community Type 21a extends from Gingin to nearly Busselton, with particular concentration south of Perth (Gibson et al, 1994). The assessment of Community Type 21a as "Well Reserved, Low Risk" is therefore an assessment of the condition of the Community across its whole distribution.

Gibson et al 1994 lists Community Types 8, 9 and 10a as Well Reserved, Vulnerable. These communities occur in scattered locations from just north of Perth to Busselton.

The location of the various plant communities is shown on the aerial photograph Figure 1.

Rare Flora

The CALM and WA Herbarium databases were searched prior to the site inspections in November and December. The species were checked in published references and any similar species collected and checked against the reference collection in the Western Australian Herbarium.

During the site inspection of 20 November 2003 the site was walked along east west transects of 50 metres. The wetland and wetland buffer areas in the west were walked at intervals of 10 - 20 metres to search for Rare or Priority species. Any species not readily identified in the field was collected and then either identified using published texts or cross checked against the Western Australia Herbarium reference collection.

No Declared Rare taxa were identified. However two Priority Taxa were recorded, although it is uncertain whether the taxa recorded as *Jacksonia sericea* is that species.

Jacksonia sericea? occurs on site in the west. The pedicel of the pods was not recurved in the specimens observed and so the taxa may not be *Jacksonia sericea*. *Jacksonia sericea*, a Priority 3 plant, is relatively common in scattered communities, particularly to the north of Perth and extends to Pinjarra. It is not under immediate threat.

Craspaedia argillicola, a Priority 2 species, was observed in the wetter areas of the west, in the area nominated as Myrtaceous shrubland and *Pericalymma - Hypocalymma* Heath. It occurs from Pinjarra to Waterloo.

The western wetland vegetation, Myrtaceous shrubland, is likely to contain other less common species. It is a vegetation type that has predominantly been locally cleared on nearby properties for summer grazing and is recommended for preservation. The *Pericalymma - Hypocalymma* Heath and the south western area of Melaleuca Woodland (MWA on Figure 1) also forms part of that buffer.

Vegetation Condition

The Vegetation Condition Scale, modified from Bush Forever, was used, as shown below.

This Assessment		Bush Forever, 2000 (See Bush Forever, 2000, Volume 2, Table 2, page 48).		Keighery/Connell and Trudgen, (See Bush Forever, 2000, Volume 2, Table 12, page 48).	
1	Excellent	1	Pristine	1	Excellent
2	Very Good	2	Excellent	2	Very Good
3	Good	3	Very Good	3	Good
4	Fair	4	Good	4	Poor
5	Degraded	5	Degraded	5	Very Poor
6	Completely Degraded	6	Completely Degraded	6	Completely Degraded

Approximately half the site is in Excellent to Very Good Condition, including the wetland vegetation along the western edge.

Some degradation occurs around the edges, particularly along the drain in the north eastern corner. Disturbance also occurs through the centre of the site. In general the edge effects are classified as Fair, and this includes a minor area of clearing in the south western corner. Some Degraded vegetation is present in the north eastern corner.

The central part shows evidence of disturbance, with vegetation disturbance caused by minor firewood gathering, partial clearing through activity, and probably some dieback, based on the death of Banksias. This vegetation is rated as being in Fair Condition.

Vegetation Condition is shown on Figure 2.

Species list

The species list below shows the species identified on site during the inspections of 15 July 2003, 20 November 2003 and 6 December 2003 and has been divided into the species found in the wetter areas and those on the sand ridge; Studies by Lindsay Stephens. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003 flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

A total of 111 taxa were identified. These are listed in two columns where they commonly occur.

- Sandridge - Higher and Lower Elevations

The species contained in the *Banksia* Woodland in the centre and east have been combined with the *Kunzea ericifolia* Thicket on the eastern boundary. These communities were searched for Rare and Priority species but individual species were not searched to the same extent as the wetland. That is the species list for the sand ridge is not complete.

Small areas of *Melaleuca* Woodland occur as scattered patches across the sandridge and in the south western corner. It contains elements of both the wetland vegetation and the sand ridge vegetation, but is dominated by the sand ridge vegetation.

- Wetland and Wetland Buffer

Pericalymma elipticum, *Hypocalymma angustifolium* Heathland is a transition between the wetter Myrtaceous Shrubland and the *Banksia* Woodland. It is included with Myrtaceous Shrubland of the wetter areas.

The small area of *Melaleuca* Woodland in the south west (Mwa) is included in this category because the understorey contains greater wetland species.

Family	Species	Predominantly found on ;	
		Wetland and Wetland Buffer	Sandridge - Higher and Lower Elevations
Amaranthaceae	<i>Ptilotus drummondii</i>	X	X
Anthericeae	<i>Tricoryne elatior</i>	X	X
	<i>Thysanotus patersonii</i>	X	X
Asteraceae	<i>Brachyscome pusilla</i>		X
	<i>Craspaedia argillicola</i>	X	
	<i>Lagenophora huegelii</i>		X
	<i>Myriocephalus appendiculatus</i>	X	
	<i>Podolepis gracilis</i>	X	
	<i>Vellereophyton dealabatum*</i>	X	
Casuarinaceae	<i>Allocasuarina fraseriana</i>		X
	<i>Allocasuarina humilis</i>		X
Colchicaceae	<i>Burchardia umbellata</i>	X	X
Cyperaceae	<i>Cyathochaeta avenacea</i>	X	
	<i>Ficinia nodosa</i>	X	
	<i>Isolepis</i> sp	X	
	<i>Lepidosperma longitudinale</i>	X	
	<i>Lepidosperma squamatum</i>	X	X
	<i>Mesommelaena tetragona</i>	X	X
Dasypogonaceae	<i>Acanthocarpus canaliculatus</i>	X	
	<i>Dasypogon bromeliifolius</i>	X	X
	<i>Lomandra preissii</i>	X	
Dilleniaceae	<i>Hibbertia hypericoides</i>		X
	<i>Hibbertia huegelii</i>	X	X

	<i>Hibbertia racemosa</i>		X
Droseraceae	<i>Drosera erythrorhiza</i>		X
	<i>Drosera gigantea</i>	X	
	<i>Drosera pallida</i>		X
Epacridaceae	<i>Leucopogon</i> sp		X
Euphorbiaceae	<i>Phyllanthus calycinus</i>		X
Goodeniaceae	<i>Dampiera linearis</i>		X
	<i>Lechenaultia expansa</i>	X	
	<i>Lechenaultia floribunda</i>	X	
Haemodoraceae	<i>Anigozanthos manglesii</i>		X
	<i>Anigozanthos viridus</i>	X	
	<i>Conostylis aculeata</i> subsp <i>aculeata</i>		X
	<i>Conostylis caricinia</i>		X
	<i>Haemodorum simplex</i>	X	
	<i>Haemodorum spicatum</i>		X
	<i>Phlebocarya ciliata</i>	X	X
Hydrochritaceae	<i>Ottelia ovalifolia</i>	X	
Iridaceae	<i>Patersonia juncea</i>	X	
	<i>Patersonia occidentalis</i>		X
Lamiaceae	<i>Hemiantra pungens</i>	X	
Lobeliaceae	<i>Lobelia alata</i>	X	X
	<i>Lobelia gibbosa</i>	X	X
Loranthaceae	<i>Nuytsia floribunda</i>		X
Mimosaceae	<i>Acacia huegellii</i>		X
	<i>Acacia pulchella</i>	X	X
	<i>Acacia saligna</i>	X	
	<i>Acacia sessilis</i>		X
Myrtaceae	<i>Astartea fascicularis</i>	X	
	<i>Beaufortia elegans</i>	X	
	<i>Eucalyptus calophylla</i>		X
	<i>Eucalyptus marginata</i>		X
	<i>Hypocalymma angustifolium</i>	X	
	<i>Kunzea ericifolia</i>	X	X
	<i>Melaleuca incana</i>	X	X
	<i>Melaleuca lateritia</i>	X	
	<i>Melaleuca preissiana</i>	X	X
	<i>Melaleuca thymoides</i>		X
	<i>Melaleuca viminea</i>	X	
	<i>Pericalymma ellipticum</i>	X	
	<i>Verticordia densiflora</i> var <i>densiflora</i>	X	
Orchidaceae	<i>Caladenia flava</i>		X
	<i>Prasophyllum</i> sp	X	
	<i>Pterostylis vittata</i>		X
	<i>Pyrorchis nigricans</i>		X
Papilionaceae	<i>Aotus gracillima</i>	X	
	<i>Bossiaea eriocarpa</i>		X
	<i>Daviesia decurrens</i>		X
	<i>Daviesia physodes</i>	X	
	<i>Gompholobium tomentosum</i>	X	X
	<i>Hardenbergia comptoniana</i>		X
	<i>Daviesia decurrens</i>	X	
	<i>Hovea elliptica</i>		
	<i>Hovea trisperma</i>	X	
	<i>Jacksonia furcellata</i>	X	X
	<i>Jacksonia lehmannii?</i>	X	X
	<i>Jacksonia stembergiana</i>		X
	<i>Jacksonia sericea</i>	X	
	<i>Viminaria juncea</i>	X	
Proteaceae	<i>Adenanthos cygnorum</i>		X
	<i>Banksia attenuata</i>		X
	<i>Banksia grandis</i>		X
	<i>Banksia ilicifolia</i>		X
	<i>Banksia menziesii</i>		X
	<i>Conospermum stoechadis</i>	X	
	<i>Dryandra lindleyana</i>		X
	<i>Hakea lissocarpha</i>		X
	<i>Hakea varia</i>	X	
	<i>Petrophile linearis</i>		X

	<i>Stirlingia latifolia</i>		X
	<i>Synaphea gracillima</i>	X	
	<i>Synaphea petiolaris</i> subsp <i>petiolaris</i>	X	
Restionaceae-	<i>Alexgeorgea nitens</i>	X	
	<i>Desmocladius fascicularis</i>	X	X
	<i>Desmocladius flexuosa</i>	X	X
	<i>Hypolaena exsulca</i>	X	
	<i>Lepyrodia glauca</i>	X	
	<i>Lyginia barbata</i>		X
	<i>Lyginia imberbis</i>	X	
	<i>Meeboldina decipiens</i> subsp <i>decipiens</i>	X	
	<i>Meeboldina roycei</i>	X	
Rubiaceae	<i>Opercularia hispidula</i>		X
Rutaceae	<i>Philothea spicata</i>		X
Stackhousiaceae	<i>Tripterococcus paniculatus</i>	X	
Stylidiaceae	<i>Stylidium brunonianum</i>	X	X
	<i>Stylidium</i> sp		X
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i> subsp <i>semibarbata</i>	X	
	<i>Xanthorrhoea gracilis</i>		X
	<i>Xanthorrhoea preissii</i>	X	X
Zamiaceae	<i>Macrozamia riedlei</i>		X

No apparent evidence of dieback occurs on the site.

Wetlands

The Myrtaceous Shrubland contain wetland species and has sufficient wetland function to be described as a wetland. The soils are generally clays in the north, with sand over clays in the south. Water lays on site for variable amounts of time each winter, particularly in the north.

The *Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland forms a transitional unit between the Banksia Woodland at lower elevation and the Myrtaceous Shrubland. However it has sufficient wetland species such as the dominance of *Pericalymma elipticum* - *Hypocalymma angustifolium* to be classified as a wetland.

Neither the *Kunzea ericifolia* Thicket nor the *Melaleuca Woodland* is classified as a wetland. Ground and shrub cover are dominated by species from lower elevation Banksia Woodland such as *Phlebocarya ciliata*. As understorey and ground cover of these communities are dominated by lower elevation Banksia Woodland/sand ridge species these communities are not classified as wetland. As wetlands are identified on the presence of wetland species, and the understorey and shrub layer are not wetlands species, the exclusion of these species is consistent with wetland mapping.

The exception is the small area of *Melaleuca Woodland* in the south western corner where *Melaleuca preissiana* occur over wetland and low Banksia Woodland groundcovers and shrubs. This area also forms a buffer to the *Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland.

The drainage channel is a constructed channel formed by excavation, predominantly along lot boundaries. It commences just east of the wetland and runs along the northern edge before turning north from the north western corner as shown on the aerial photograph which shows general localities. Figure 4. The drain has locally lowered the water tables in the north of Lot 295 and the north east , and reduced the presence of surface water in those areas. Over time these water balance changes will cause gradual changes in the vegetation communities towards more sand ridge (Banksia Woodland) vegetation.

The location of these Wetlands is shown on the attached aerial photographs, Figure 1

The wetlands from the Walis Geomorphic Wetland Mapping Dataset are provided at the same scale as the aerial photograph for overlay purposes. The Geomorphic Wetland Mapping Dataset extends wider than the wetlands, extending into areas of Banksia Woodland. Compare Figure 1 with Figure 3 and the attached print from Walis Mapping. Ground mapping is therefore regarded as more accurate.

The quality of wetlands is normally assessed using EPA Bulletin 686, A Guide to Wetland Management in the Perth and Near Perth Swan Coastal Plain Area. This categorises wetlands on natural and Human attributes.

The two wetlands present on site are the western *Pericalymma ellipticum* *Hypocalymma angustifolium* Heathland and Myrtaceous Shrubland, which forms one wetland and the drain which forms a disturbed wet area.

The wetlands are shown on the attached aerial photograph as Community Types Myrtaceous Shrubland and *Pericalymma* - *Hypocalymma* Heath.

Human Attributes

The database of the Department of Indigenous Affairs was searched, and whilst there are archaeological and ethnographic sites in the Pinjarra area none of the Latitude/Longitude values matched those for Lot 259 as taken by GPS. The land is privately owned and was sold to the present owners by the Government. As far as the owners are aware no archaeological or ethnographic sites are known from Lot 295.

It is known that land adjoining to the east has been provided to the local Aboriginal People as the "Aboriginal Association" in Hampton Road to the east.

Question IIIb asks for "registered Aboriginal relics or sacred sites" on the wetland site. As far as is known there are no recorded sites on Lot 295. See attached database from Department of Aboriginal Affairs.

Part I PRESENCE OF RARE SPECIES

No	Item	Western Edge	Drain
I	Rare species	Potentially present. Declared Rare species were noted, but one and possibly two Priority species were recorded	Less likely due to disturbance. No Declared Rare or Priority species were recorded.

Part II NATURAL ATTRIBUTES - seasonal and episodic wetlands

No	Item	Western Edge	Drain
IIBi	Quindalup	No 1	No 1
IIBii	Adjacent wetlands	Limited 3	Yes 0
IIBiii	Habitat Diversity	Yes 3	No 1
IIBiv	Habitat Type	Low thickets, seasonal flooding, adjacent vegetation 3	Adjacent vegetation 1
IIBv	Drainage	No 5	Yes 0
IIBvi	Area of modified wetland	< 10% 5	> 40% 1
IIBvii	Wetland size	< 10ha 1	< 10ha 1
	TOTAL	21	5

Part III HUMAN ATTRIBUTES

No	Item	Western Edge	Drain
III	Aesthetics	Low noise 2	Low noise 2
IIIii	Historic/Arch	Nil 0	Nil 0
IIIiii	Security	Private land 1	Private land 1
IIIiv	Protection Groups	Nil 0	Nil 0
IIIv	Passive Recreation	Nil 0	Nil 0
IIIvi	Active Recreation	Nil 0	Nil 0
IIIvii	Human use	Private 1	Private 1
	TOTAL	4	4
	classification	HIGH CONSERVATION BASED ON POTENTIAL FOR RARE SPECIES	MULTIPLE USE

Part IV SUPPLEMENTARY QUESTIONS

No	Item	Western Edge	Drain
IVi	Species Rarity	Less common vegetation communities and two Priority species are present (Yes)	The vegetation communities associated with the drain are common and not "Threatened" (No)
IVii	Effect on land values	May slightly increase land values (Yes)	Unlikely to affect land values (No)
IViii	Human Use	Private land (No)	Private land (No)
IViv	Private human use values	The owner feels that the wetland is an impediment	The owner feels that the drain is an impediment to subdivision and land usage
	classification	Remains as HIGH CONSERVATION based on the quality of the vegetation communities and species	Remains as MULTIPLE USE

Findings

- The wetland on the western boundary is of High Conservation value because this type of vegetation has predominantly been locally cleared. As such there is potential for the presence of Rare species and there are two Priority species recorded. The vegetation communities of the Guildford Complex are poorly represented and not well preserved in secure reserves.
- The wetland vegetation along the western boundary (Myrtaceous Shrubland and *Pericalymma - Hypocalymma* Heath) is in Excellent Condition.
- On the other hand the drainage line along the northern boundary is significantly altered and has limited value. It drains the northern and north eastern areas and has locally lowered water tables and minimised the potential for temporary surface water in winter.
- The drain has potential to be moved, but this needs to be weighed against the potential impact on remnant vegetation.
- Other areas of vegetation on site (*Melaleuca* Woodland and *Kunzea ericifolia* Thicket, with the exception of Mwa on Figure 1) are not classified as wetlands because the understorey and ground cover species are lower elevation sandridge species of Community Type 21c.
- The Geomorphic Wetland Mapping Dataset extends wider than the wetlands, extending into areas of *Banksia* Woodland. Ground mapping is therefore regarded as more accurate.

- Central parts of the site have vegetation in only Fair Condition, possibly due to dieback and weed incursion
- Weeds are spreading from the north east corner and as edge effects along the roadside and firebreaks.
- The sandridge vegetation, which is dominated by Banksia Woodland, it is in generally Good condition, varying from Fair to Good - Excellent.
- Lot 295 was sold by the Government two years ago for subdivision. Therefore flora studies conducted prior to the sale by Government would have classified the significance of the vegetation at the time of sale. As the land was sold it can be concluded that the site was not required for conservation purposes.

Recommendations

1. The vegetation along the western edge of Lot 295 (Myrtaceous Shrubland) is classified as a wetland of High Conservation value. It should be protected, and provided with clearing restrictions, restrictions on fire breaks and possibly conservation covenant.
2. The location of this vegetation, at the rear of lots in that part of the proposed subdivision, makes this level of protection suitable. If the area is further subdivided to urban, as identified by the Shire of Murray, the wetland may have to be excluded, although decisions on this will be delayed pending further assessment at that time.
3. The *Pericalymma - Hypocalymma* Heath and Mwa on Figure 1, form a transitional unit between the Myrtaceous Shrubland and Banksia Woodland. Where possible impacts on this vegetation should be minimised.
4. Other vegetation on Lot 295 is variable Condition, but it is recommended that where possible the better vegetation be protected by strategic location of building envelopes in the vegetation of lower condition. This could require clustering and restrictions on clearing.



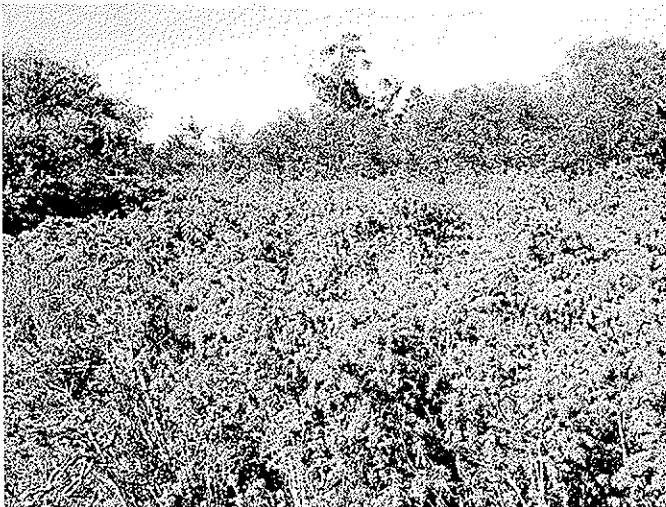
Myrtaceae Shrub Wetland in the north with regrowth following fire



Myrtaceae Shrubland looking towards *Melaleuca proissiana* in the buffer zone



View of the transition zone between the wetland and Banksia Woodland in the background



Myrtaceae Shrubland - wetland in the south western corner with common *Melaleuca incana*



Myrtaceae Shrubland - wetland with common *Viminaria juncea*

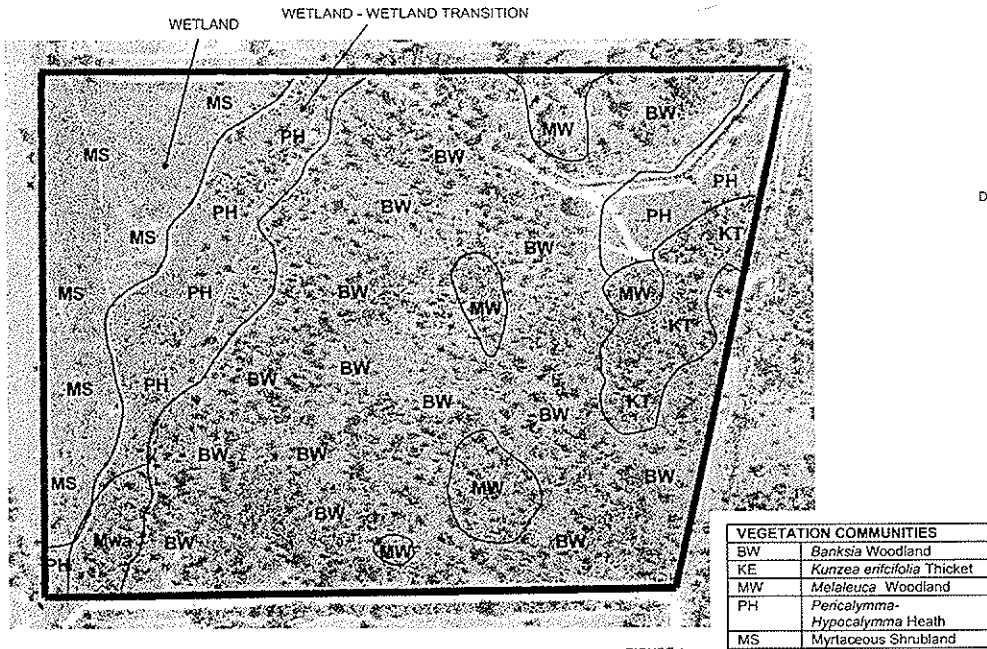


FIGURE 1

VEGETATION ASSESSMENT - LOT 259, ALDERSON ROAD, PINJARRA

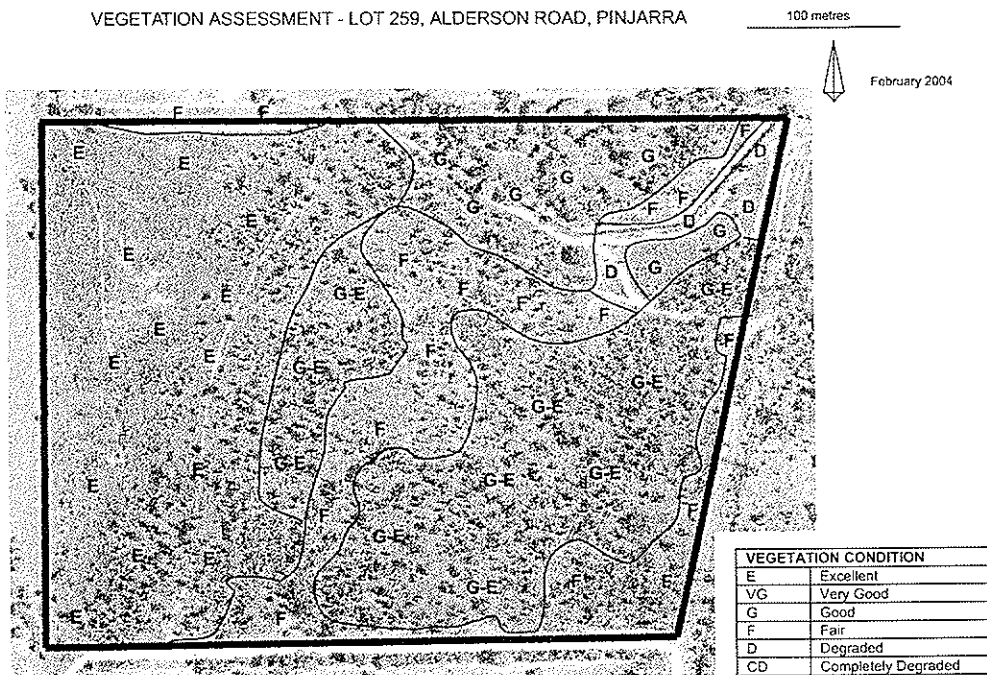


FIGURE 2



Scale 1 : 12 500 approx

FIGURE 3

Wetland Assessment, Lot 295
Alderson Street Pinjarra

The wetlands from the Walls Geomorphic Wetland Mapping Dataset are provided at the same scale as the aerial photograph for overlay purposes. The Geomorphic Wetland Mapping Dataset extend wider than the wetlands, extending into areas of *Banksia* Woodland. Compare with Figure 1.

Compare to the attached print from Walls Mapping



**LOT 295 ALDERSON STREET, PINJARRA
BACKGROUND IN RELATION TO
CONSERVATION VALUES**

LOT 295 ALDERSON STREET, PINJARRA - BACKGROUND IN RELATION TO CONSERVATION VALUES

Introduction

Lot 295 Alderson Street (Figure 1) has an area of 18.2 ha. The land is undeveloped excepting for a drainage channel that has been formed between the north-east and north-west corners of the site. The site comprises a combination of wetlands and uplands, containing a range of vegetation types, mainly in good-excellent, or excellent condition. Vegetation on the site is representative of the Southern River Vegetation Complex which is a priority for protection. Lot 295 is located in a part of the Swan coastal plain where extensive clearing has taken place. Wetlands on the site are assigned to Conservation management category, the highest management category.

The following information sets out the chronology of events relating to the environmental values of the land :

1. ***Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain***

The report *Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain* (Keighery and Trudgen) was published in 1992. This was an appraisal of remnant native vegetation of the alluvial soils eastern side of the Swan Coastal Plain between Pinjarra and Gingin. It was initiated by the Department of Conservation and Land Management and funded by the Australian Heritage Commission due to the high level of clearing of the eastern side of the plain. Most remnants were described and compared on their flora and conservation values. The report also consolidated information on the outstanding flora and vegetation biodiversity values of the area.

The vegetation and flora of the location were described and the vegetation units mapped. Lot 295 was identified as having significant flora conservation value.

2. ***System 6 Update Survey Programme, 1995***

As part of the System 6 Update Survey Programme, Lot 295 was surveyed in November 1995 by a botanical team from the (then) Department of Environmental Protection. Four floristic communities, seven significant flora and a diversity of native plant species (including Priority 3 species and Declared Rare Flora) were identified. Members of the Royal Australian Ornithological Union (now Birds Australia) made recordings of the birds in the area as part of this work and the significance of the site for birdlife was noted.

3. ***Wetlands of the Swan Coastal Plains Volume 2B: Wetland Mapping Classification and Evaluation, Wetland Atlas (1996)***

Wetland mapping for the Swan Coastal Plain was originally published by the Water and Rivers Commission and the Department of Environmental Protection in the *Wetlands of the Swan Coastal Plain Volume 2B: Wetland Mapping Classification and Evaluation, Wetland Atlas* (Hill, Semeniuk, Semeniuk and Del Marco 1996). Wetlands including those on Lot 295, were identified and their boundaries delineated, and they were classified into wetland type using the geomorphic classification system (Semeniuk 1987) (see Figure 2). Wetlands south of Mandurah were not evaluated or assigned a management category as part of this study.

4. ***Inner Peel Region Structure Plan, 1997***

In 1997, the *Inner Peel Region Structure Plan* identified Lot 295 as being low-lying, prone to saturation and flooding during the wet season, and notable for the presence of rare flora and threatened communities. It included Lot 295 within the classification *Natural Resource Protection Area - Subject to Further Study* (Figure 3). This classification applies to areas of bushland in good condition, requiring further studies to determine appropriate mechanisms for their protection.

5. ***Evaluation of Wetlands of the Southern Swan Coastal Plain (1998)***

Prepared by the V & C Semeniuk Research Group for the Water and Rivers Commission, *Evaluation of Wetlands of the Southern Swan Coastal Plain* (1998) evaluated the wetlands between Mandurah and Dunsborough and assigned management categories (Conservation, Resource Enhancement and Multiple Use). As part of this study, the wetlands on Lot 295 were determined to be Conservation management category.

The data from the 1996 study (see 3, above), the 1998 study and further verification studies, was subsequently digitised to form the *Geomorphic Wetlands Swan Coastal Plain* dataset. In the period between 1998 and 2004, a small area of the eastern portion of wetland was re-assigned to Multiple Use management category (Figure 4). It is considered likely this occurred due to a digitising or data error rather than a data edit by the Water and Rivers Commission. It was corrected following the review of the mapping in 2004 (see 9, below).

6. ***Pinjarra Urban Expansion Plan, 1998***

In 1998, the Shire of Murray's *Pinjarra Urban Expansion Plan* included Lot 295 within Precinct 4 Pinjarra West of the strategy precinct plan. One of the key objectives for this 455 ha precinct is "to protect areas of significant remnant vegetation that exists in pockets within the area".

The plan included Lot 295 (18 ha) within the classification, *Subject to Resource Protection Study* (Figure 5) and stated that development within the Natural Resource Protection Area (defined in the *Inner Peel Region Structure Plan*) should be subject to a full study to protect significant remnant vegetation.

7. Shire of Murray Town Planning Scheme No. 4 Amendment No. 171

In November 2002, the Shire of Murray initiated an amendment to its town planning scheme to rezone Lot 295 from Rural to Special Rural, to enable the land to be subdivided into eight lots ranging in size from 2.0 ha to 2.8 ha (Figure 6) (ie. Amendment No. 171). The proposed amendment included an indicative layout for future special residential subdivision into 4,000 - 5,000m² lots. In July 2003, the EPA requested additional information in regard to the environmental values of Lot 295.

8. Wetland Assessment, Lot 295 Alderson Street, Pinjarra (Landform Research)

In February 2004, a report was prepared by Mr Lindsay Stephens (Landform Research) in response to the EPA request for additional information. This set out the findings from surveys undertaken by Mr Stephens during July and December 2003, and June 2004, and made the following observations :

- Mr Stephens' report stated that the Geomorphic Wetland Mapping Dataset (the Conservation Category Wetland) extends wider than the wetlands defined by his study, ie. into areas of Banksia Woodland, and that his ground mapping is regarded as more accurate.
- There are two wetlands on the site. These are the western wetland comprising the *Pericalymma ellipticum Hypocalymma angustifolium* Heathland and the *Myrtaceous Shrubland* shown on Figure 7, and the drain which forms a disturbed wet area.
- The western wetland has high conservation value because this type of vegetation has been predominantly cleared, locally. As such, there is potential for rare species and two Priority species have been recorded.
- Myrtaceous shrubland in the western wetland is likely to contain less common species and has been predominantly cleared, locally, and is recommended for preservation.
- Plant communities of the *Pericalymma* Heathland are present. While well-reserved, these are acknowledged as Vulnerable. This heathland forms part of the buffer to the Myrtaceous shrubland.
- Plant communities of the Banksia Woodland are present. These are well reserved on the Swan Coastal Plain, with a conservation status of Low Risk.
- No Declared Rare taxa were identified in the report.
- Two Priority taxa were recorded.

- Priority 3 taxa in the north of Lot 295 are not under immediate threat.
- The sand ridge vegetation, which is dominated by Banksia Woodland, is generally in Good condition, varying from Fair to Good - Excellent.
- Weeds are spreading from the north-east corner and as edge effects along the roadside and firebreaks.

The report notes that land within Lot 295 is has been identified as falling within the Guildford Complex and that this complex has only 5% remaining. Of the remaining vegetation, 143 hectares is in secure tenure, representing 0.2% of the pre-1750 extent of the vegetation.

Five vegetation units are mapped, one upland unit and four wetland units. These were considered to most like floristic community types 21a and 21c or have elements of floristic community types 8, 9 and 10a.

The report lists five significant flora for Lot 295: *Jacksonia sericea* (Priority 3), *Craspedia argillicola* (Priority 2), *Myriocephalus appendiculatus*, *Ottelia ovalifolia*, *Meeboldina decipiens* subsp. *decipiens*, *Acacia lasiocarpa* 'Pinjarra Form'.

Mapping in the Stephens report indicates the vegetation within Lot 295 (Figure 8) is mainly in Good-Excellent or Excellent condition.

9. **Review of *Geomorphic Wetlands Swan Coastal Plain* dataset for Lot 295 Alderson Street, Pinjarra**

In October 2004, the Department of Environment (DoE) inspected Lot 295 and reviewed a submission from the landowners' planning consultant requesting modification of the dataset on the basis of the Stephens report (see 8, above). In November 2004, the DoE made modifications to the wetland boundaries and management categories in the *Geomorphic Wetlands Swan Coastal Plain* dataset to reflect the outcomes of the review of the Stephens report, desktop analysis and ground-truthing of the site. The DoE did not support reclassification of a large proportion of the site to '*no longer a wetland*' as the basis for the requested reclassification was limited to the assertion that the area in discussion 'does not support wetland dependent vegetation', which was not supported.

Some increase in the area defined as Conservation category wetland was made (Figure 9). The analysis and site verification of the newly-identified wetland areas was undertaken by the DoE. It determined these to be significant on the basis of naturalness, reflected by the quality and diversity of vegetation, contiguity with upland vegetation, context of the remnant's values within a highly-cleared landscape, habitat values and presence of significant flora. It also stated that the wetland areas are valuable on the basis of their representativeness of the wetland suite. The management category of these wetlands was upgraded to Conservation category in the *Geomorphic Wetlands Swan Coastal Plain* dataset.

10. **EPA Determination of Amendment No. 171**

On 6 December 2004, the Environmental Protection Authority advised that Amendment No. 171 had been determined under section 48A of the Environmental Protection Act as being incapable of being made environmentally acceptable, due to the following (in brief) :

- Clearing of vegetation deemed to be regionally significant - this referred to the quality and diversity of vegetation, combination of wetland and uplands, significant flora and habitat value for regionally-significant birdlife; and
- Impacts on wetlands - this referred to the naturalness, quality and diversity of vegetation, contiguity with upland vegetation, habitat value and significant flora.

11. **Determination of Amendment No. 171 under Section 48A(2)(b) of Environmental Protection Act by Minister for the Environment**

On 21 December 2004, the Minister for the Environment consulted the Minister for Planning and Infrastructure on her proposed determination of Amendment No. 171 under the Environmental Protection Act, advising that she concurred with the EPA assessment and that acceptance under section 48F(2) of the EP Act was requested.

On 9 June 2005, the Minister for Planning and Infrastructure advised the Minister for the Environment that she concurred that the amendment is not capable of being made environmentally acceptable. The Minister for Planning and Infrastructure also wrote to the Chairman of the Western Australian Planning Commission, requesting that an amendment be initiated to the Peel Region Scheme to include the land in the Regional Open Space reservation, to allow the landowner to seek compensation.

On 5 July 2005, the Minister for the Environment advised under section 48A(2)(b) of the Environmental Protection Act that Amendment No. 171 should not be implemented.

The process for Ministerial consideration of Amendment No. 171 included the provision of written advice to both Ministers. In this respect, the information and conclusions contained in the studies outlined above were taken into account and the environmental values of the land were verified by means of detailed inspections of the land, carried out by expert representatives of the Department of Environment and expert representatives of the Department for Planning and Infrastructure (who included qualified and experienced botanists) on two occasions.

The re-assessment of the site as part of this process concluded that the environmental values of the site are as follow :

- **Representation of ecological communities** : The bushland of Lot 295 is representative of the Bassendean Central and South vegetation complex. Of the original extent of this complex on the Swan Coastal Plain, less than 27% remains. Only 0.7% of the original extent is in secure tenure (National Parks, Nature Reserves, Conservation Parks and 5g Reserves managed by CALM). Therefore, any bushland of Bassendean Central and South complex is a priority for protection.
- **Diversity** : The bushland on Lot 295 contains uplands and wetlands, and a variety of vegetation units from four floristic community types. Three surveys conducted by Landform Research have identified 111 flora taxa.
- **Protection of wetland, streamline, and estuarine fringing vegetation and coastal vegetation** : The majority of Lot 295 contains a Conservation category wetland (CCW). Most of the area identified as a CCW is also on the register of the *Revised Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy 2004*.

12. **PRS Amendment 012/33A (Regional Open Space - West Pinjarra)**

On 19 August 2005, the Peel Region Planning Committee of the Western Australian Planning Commission resolved to initiate Amendment No. 012/33A of the Peel Region Scheme. This proposes to include Lot 295, together with Lots 299, 309, 350, 354 and portion of the Alderson Street road reserve (Figure 10) within the Regional Open Space reservation.

Reservation of this area was proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

In the purely environmental context, the area subject of the amendment is considered locally and regionally significant because of the quality and range of vegetation types, including both wetland and upland areas, the presence of significant and rare flora, and its wildlife habitat value. This significance of these considerations is greatly increased by the amount of clearing that has taken place in the area and by the presence of Conservation Category Wetlands on Lots 295 and 350.

13. **Submission on PRS Amendment 012/33A - cornerstone legal**

A submission on Amendment No. 012/33A has been received from *cornerstone legal* on behalf of the owners of Lot 295. This places heavy emphasis on environmental matters and includes a report prepared by V & C Semeniuk Research Group (see below).

14. **Wetlands Report by V & C Semeniuk Research Group**

Commissioned by *cornerstone legal* and prepared in December 2005, this report is based on a field survey that included the collection and examination of soil samples and a limited botanical study. It examines the question of whether the whole of Lot 295 would be considered a wetland, or only part.

The botanical study was not comprehensive but was intended to show species that inhabit the wetlands.

Under the heading, Description of the Regional Landscape, the report noted that throughout the region, there has been extensive clearing for agriculture and, as such, the local area of Lot 295 and adjoining terrain supports an isolated patch of remnant vegetation.

The report identifies four wetlands on Lot 295 (see Figure 11) and classified these as damplands (seasonally waterlogged) or sumplands (seasonally inundated). These wetlands are as follow :

Wetland 1 - vegetated dampland, 200m x 50m long; extends into adjoining lot;

Wetland 2 - forested sumpland, about 100m in diameter;

Wetland 3 - forested dampland, southern sectorial portion of the wetland that occurs in Lot 295, about 200m wide;

Wetland 4 - vegetated sumpland, about 300m long along western boundary; more complex, comprises four zones :

Zone A - peripheral transition zone;

Zone B - low heath to sedgeland;

Zone C - heath (in one of its wettest parts);

Zone D - heathland/woodland (in it other wettest part).

The report also states the following :

- Wetlands 1, 2 and 4 are regionally significant;
- Protection of these wetlands would require a buffer of 50 - 200m, depending on details of the intended land use.
- Wetland 3 is not regionally significant.

Footnotes Regarding Regional Significance

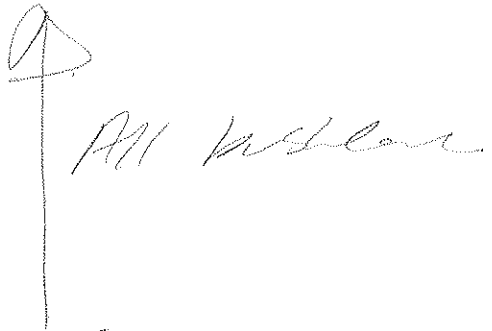
- A survey in November 1995 by the Royal Australasian Ornithologists Union on the adjacent and contiguous vegetation recorded 25 bird species. An edge assessment by the Department of Environment in October 2003 recorded 18 bird species in Lot 295 including four species of regional significance, having declined on the coastal Plain. The reptile species, *Tiliqua rugosa* was also recorded.

Combining data from the above two surveys, five bird species of regional conservation significance have so far been recorded during preliminary surveys of the location. This indicates that the site has regional significance for bird fauna.

- Thirteen additional flora species were recorded by Keighery in November 1995, ie. 13 species add to 124 species recorded for the lot.
- From the System 6 Update and the Stephens report, at least seven significant species are now recorded for Lot 295 : *Jacksonia gracillima* (identified as *J. ?sericea* in Stephens report), *Craspedia argillicola* (P2), *Myriocephalus appendiculatus*, *Ottelia ovalifolia*, *Meeboldina decipiens* subsp. *decipiens*, also expect *Stylidium longitubum* (3), *Stylidium mimeticum*, *Rhodanthe pyrethrum* (3), *Myriophyllum echinatum* (3).
- The Stephens report refers to elements of floristic community types 8, 9 and 10a being evident in the western wetland. These are all threatened ecological communities. The report refers to conservation significance rankings in Gibson *et al* 1994 which are not suitable for current regional comparisons, and were not in 2004 when the report was produced. *Acacia sp. Pinjarra*
- Lot 295 is mapped as being in the Bassendean Central and South vegetation complex. However, the vegetation and finer scale geomorphology and soils mapping shows that some portions of the lot would be better classified as part of the adjacent Guildford Complex. As a consequence, Lot 295 and Location 39 would be best mapped as the Southern River Complex. All of these complexes are poorly reserved and have less than 30% of their original area remaining on the Swan Coastal Plain.
- A composite image (Figure 12), showing vegetation communities (Landform Research), vegetation condition (Landform Research) and Wetlands (Semeniuk Research Group) is attached.

- The vegetation condition scale used in the Stephens report is not the scale endorsed by the DEC as used in Bush Forever. It is believed the comparable condition scales are as follow :

Stephens	Bush Forever
Excellent	Pristine
Good-Excellent	Excellent
Good	Very Good
Fair	Good



John Pride
Senior Project Planner
Peel Region Scheme

28 July 2006



- Cadastre with Lot Numbers
- Cadastre

*Submit 2 Nov 2006
11/09/06
Dot Housing and works: Sula as
concern for ability to develop*

2006 Metro/Peel Aerial Photography

AMENDMENT SITE

Scale 1:6,000
0 125 m

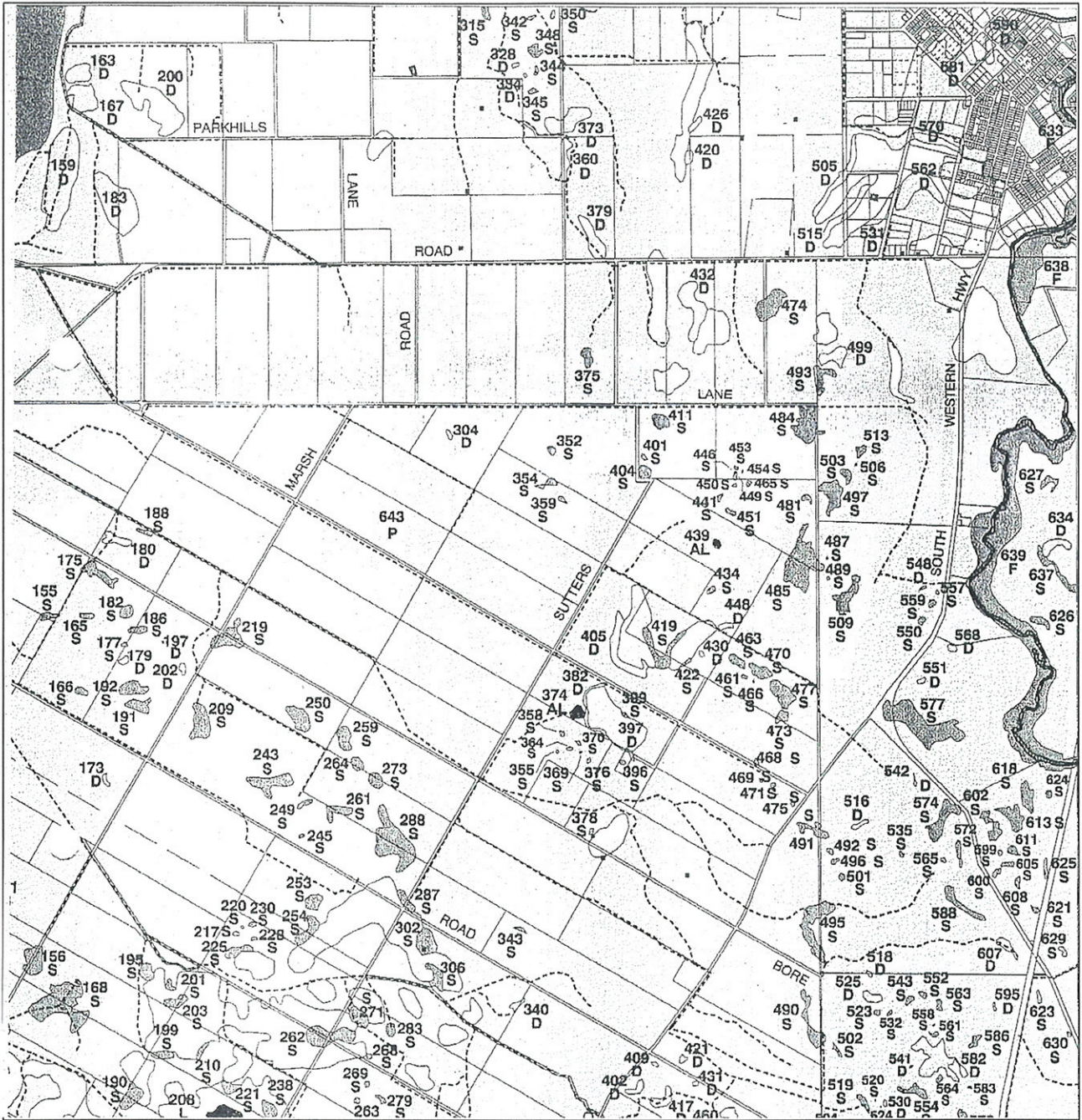
Prepared by: dsanderson
Prepared for: Hearings Committee
Date: Thursday, July 27, 2006 09:11
Plot identifier: P20060727_0911



Department for
Planning and Infrastructure

FIGURE 1

DPI INTERNAL USE ONLY



WETLANDS OF THE SWAN COASTAL PLAINS VOLUME 2B
WETLAND CLASSIFICATION & EVALUATION

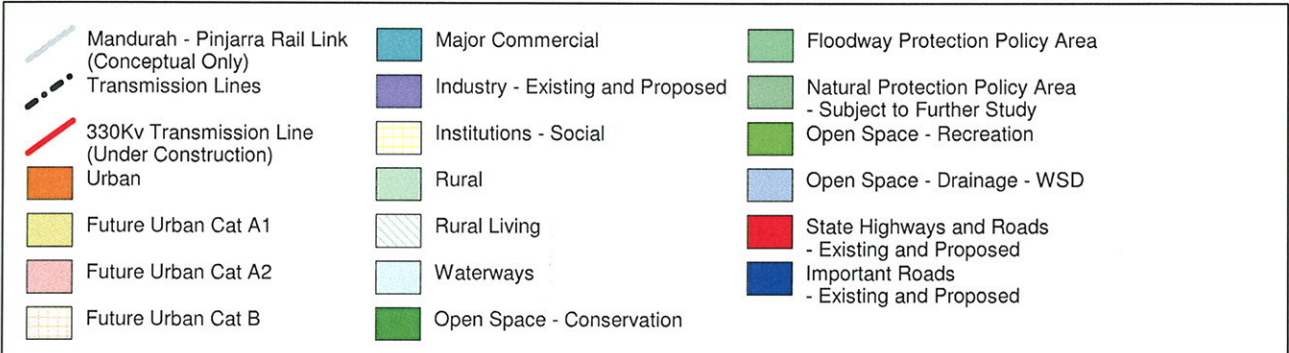
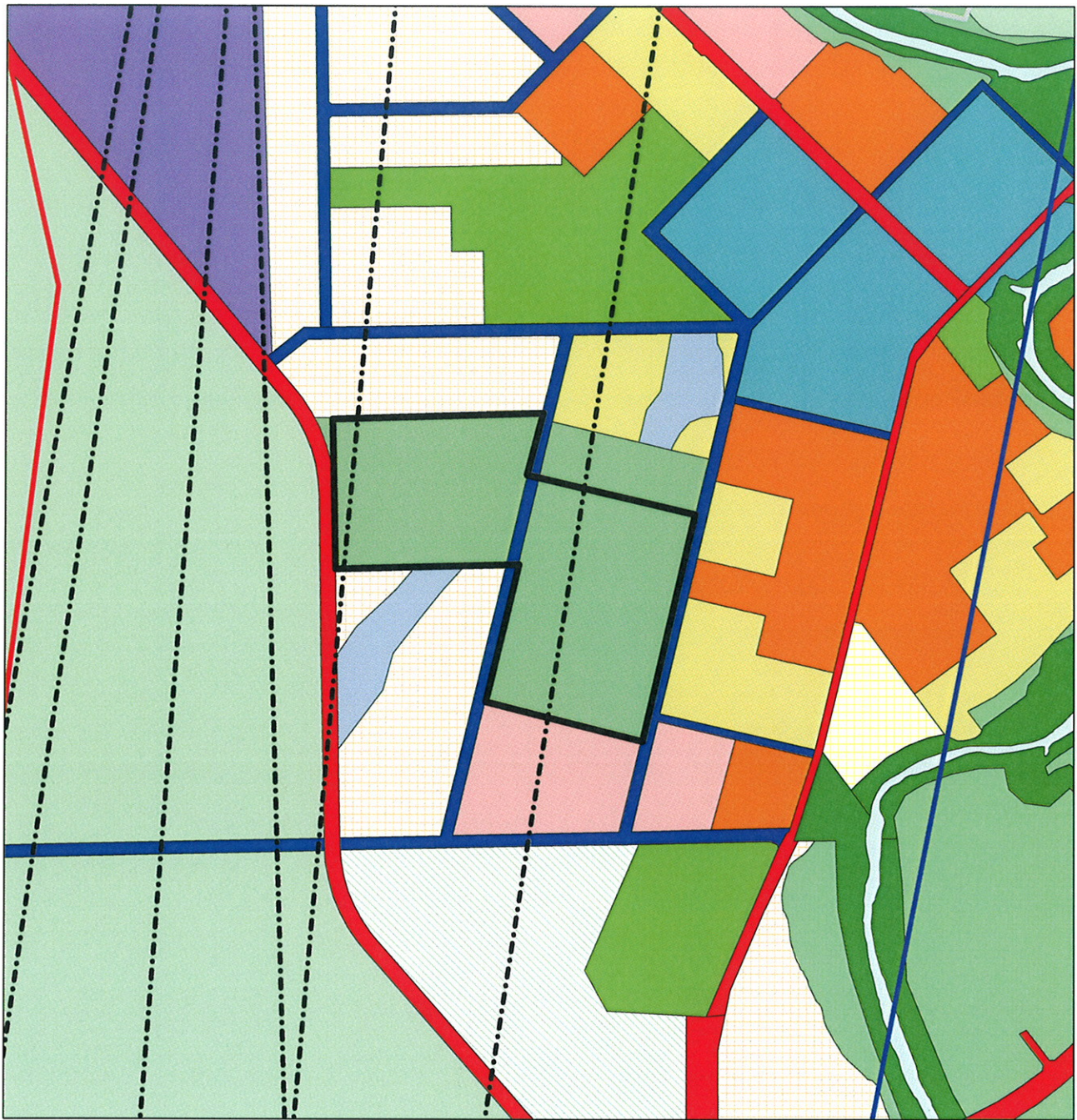
Prepared by: dsanderson
 Prepared for: Hearings Committee



Department for
 Planning and Infrastructure

FIGURE 2

DPI INTERNAL USE ONLY



Scale 1:15,000
 0 500 m

Prepared by: dsanderson
 Prepared for: Hearings Committee
 Date: Thursday, July 27, 2006 09:48
 Plot identifier: P20060727_0948



DPI INTERNAL USE ONLY






INNER PEEL REGION STRUCTURE PLAN 1997

Department for Planning and Infrastructure

FIGURE 3



-  Cadastre with Lot Numbers
-  Cadastre
-  Conservation
-  Multiple Use

WETLANDS OF THE SWAN COASTAL PLAINS
VOLUME 2B
WETLAND CLASSIFICATION & EVALUATION

Scale 1:4,000
 0 125 m

Prepared by: dsanderson
 Prepared for: Hearings Committee
 Date: Tuesday, July 25, 2006 16:46
 Plot identifier: P20060725_1646



Department for
 Planning and Infrastructure

FIGURE 4

DPI INTERNAL USE ONLY

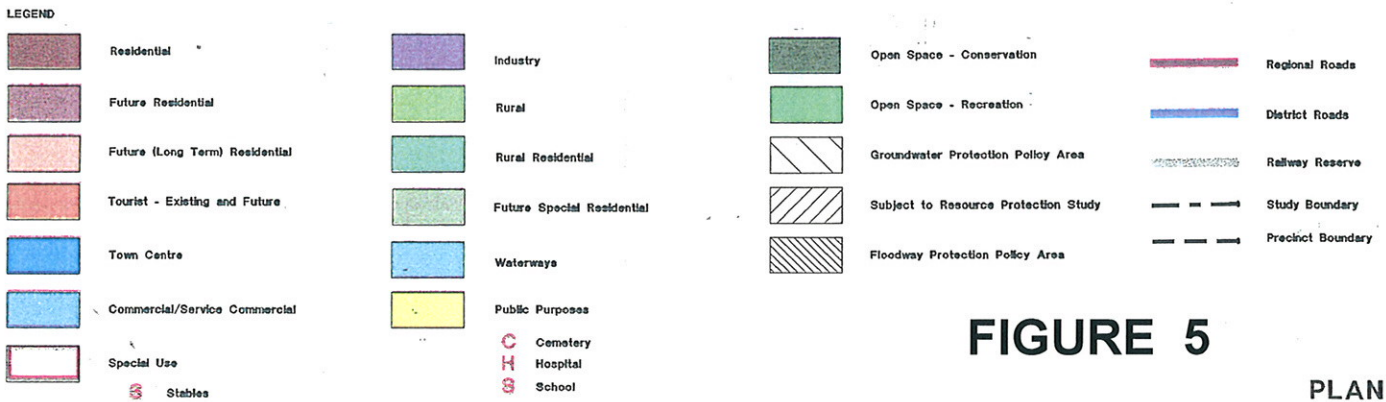
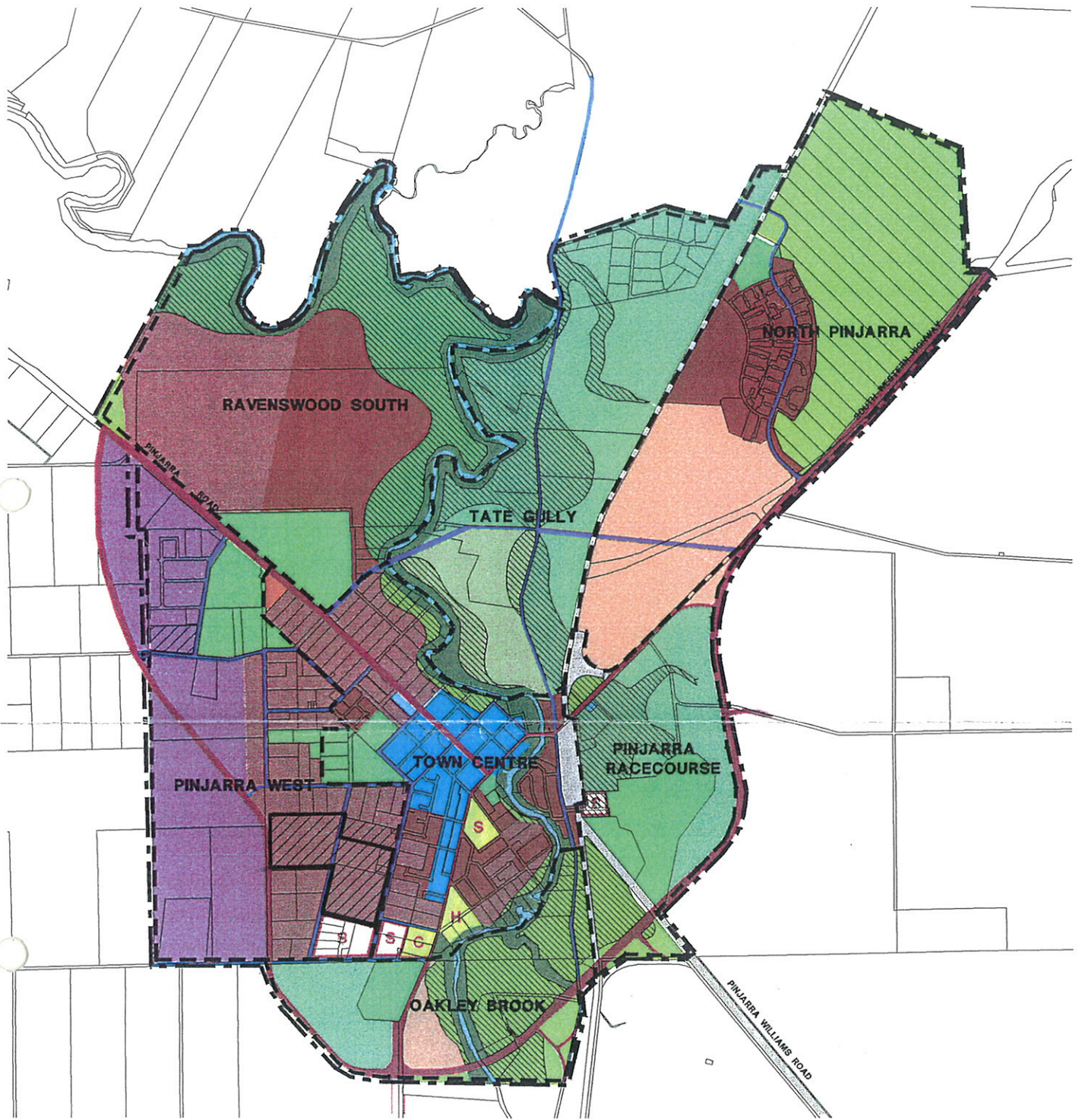


FIGURE 5

PLAN 13

PROJECT **PINJARRA URBAN EXPANSION STRATEGY**
 DRAWING TITLE **STRATEGY PLAN**
 PRINCIPAL **SHIRE OF MURRAY**



CONSULTING ENGINEERS
 TOWN PLANNERS
 PROJECT MANAGERS
 ENVIRONMENTAL CONSULTANTS

Date 23.05.08 Scale 1:300,000
 Drawn [Signature] Checked [Signature]
 Drawn [Signature] Approved [Signature]
 Lead Authority [Signature] Sheet 1 of 1
 SHIRE OF MURRAY
 Project Number P97040 Drawing Number P307-R28

This drawing is prepared in accordance with the BSD Quality Management System. It is the property of BSD and shall not be used without permission. This drawing is preliminary and/or not for construction until signed approved. ORIGINAL A3

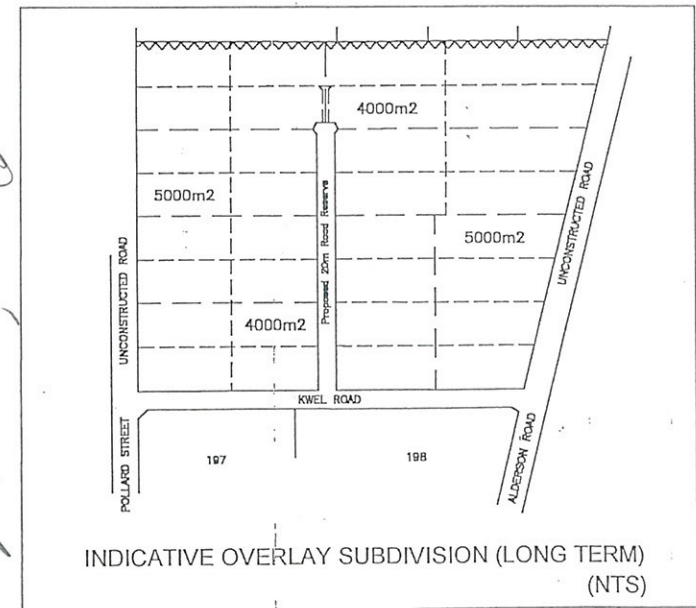


LEGEND

- Proposed 2.0 Ha Special Rural Lot
- ~~~~~ 10 m Wide Drainage Easement
- - - - Individual Crossover / Drive
- [] Building Envelope

NOTES

1. Exact lot areas and size of drainage areas to be determined during detail design.
2. Alternative Treatment Units will be required for all onsite effluent disposal.
3. Internal firebreaks will be indicated on the Fire Management Plan to be endorsed by Council, and will be limited to areas outside of the vegetation corridors.
4. Building envelopes are notional only, and may be positioned alternatively, provided the overlay plan is respected.



Owner's proposal

PROPOSED SHIRE OF MURRAY TPS No.4
 AMENDMENT No. 171
 (SUBDIVISION GUIDE PLAN)

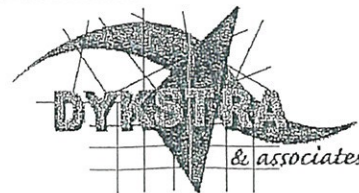


FIGURE 6



**VEGETATION COMMUNITIES
LOT 295 (L.STEPHENS)**



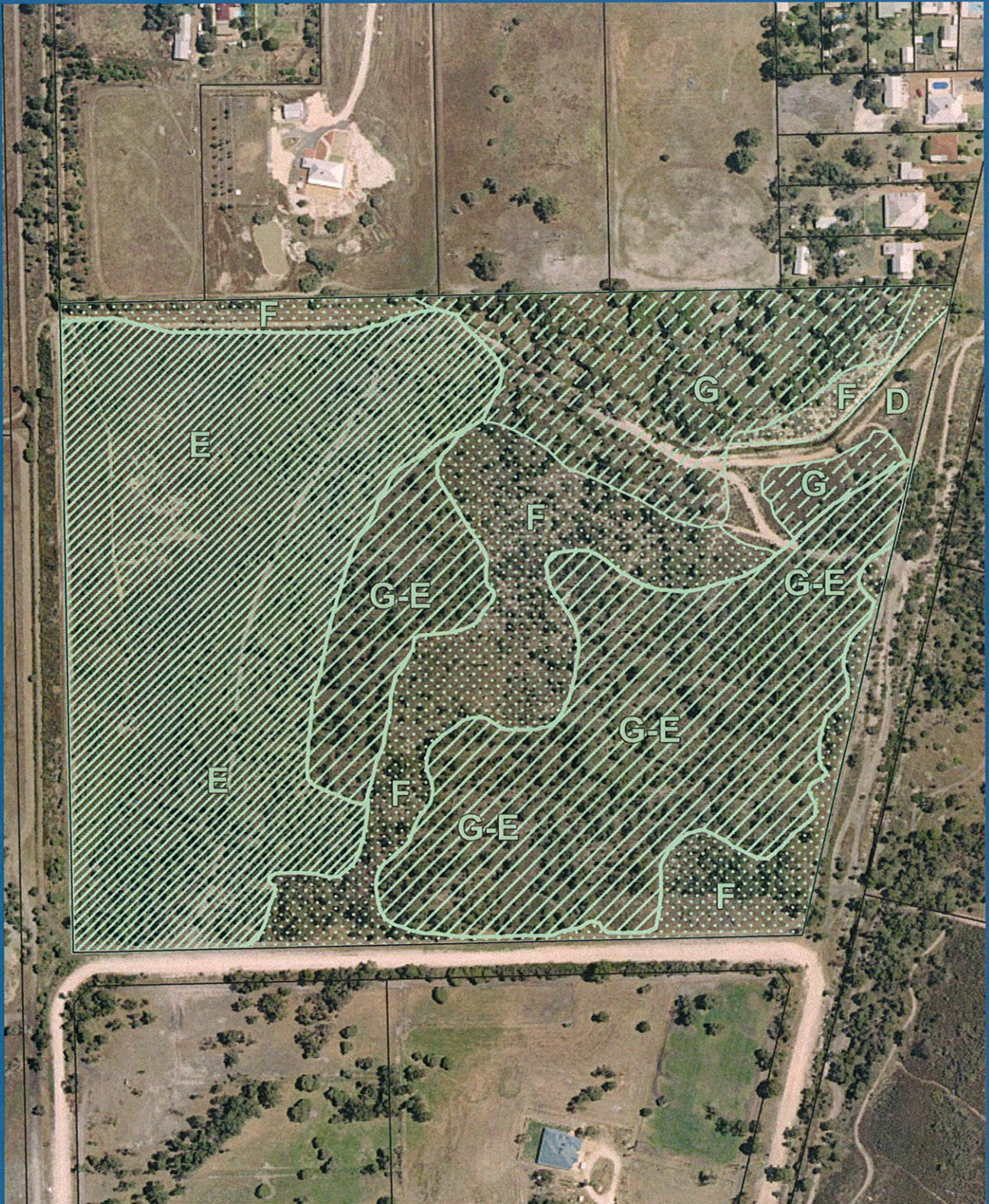
Aerial Photography - ortho-rectified
Original photography - Department of Land Information (DLI)
Flown: December 2004 Scale 1:20000
Positional accuracy var. 4 metres

lot295_vegcomm.dgn

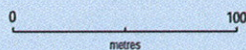
29 Jul 2008

Prepared by Statutory Mapping Section, Spatial Information & Research - Mapping & GeoSpatial Data,
Department for Planning and Infrastructure, on behalf of the Western Australian Planning Commission, Perth WA
Base information supplied by DLI PA 25 2003

FIGURE 7



**VEGETATION CONDITION
LOT 295 (L.STEPHENS)**



Aerial Photography - ortho-rectified
Original photography - Department of Land Information (DLI)
Fixed: December 2004 Scale 1:20000
Positional accuracy +/- 4 metres

lot295_vegcond.dgn
28 Jul 2008
Prepared by: Statutory Mapping Section, Spatial Information & Research - Mapping & GeoSpatial Data,
Department for Planning and Infrastructure, on behalf of the Western Australian Planning Commission, Perth WA
Base information supplied by DLI PA 25 2003

FIGURE 8

Lot 295 Alderson St Pinjarra



LEGEND

- Cadastre - DLI 1/09/04
- Map Sheet Index, 25K - WRC 14/08/02
- Local Rd - Other
- Local Rd - Sealed
- Conservation
- Multiple Use
- Not Applicable

Swan Coastal Plain South 1m Orthomosaic - DLI 01/04

Scale 1:4,184
(Approximate when reproduced at A4)

Geocentric Datum of Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: LawmJ
Prepared for: John Pride DPI
Date: Tuesday, 18 July 2006 12:03

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.

Department of Environment
WA Crown Copyright 2006



- Cadastre with Lot Numbers
- PRIMARY REGIONAL ROADS
- REGIONAL OPEN SPACE
- URBAN
- URBAN DEFERRED
- INDUSTRIAL
- RURAL

PRS AMENDMENT 012/33A
(REGIONAL OPEN SPACE - WEST PINJARRA)

Scale 1:7,500
 0 ————— 250 m

Prepared by: dsanderson
 Prepared for: Hearings Committee
 Date: Thursday, July 27, 2006 13:45
 Plot identifier: P20060727_1345



Department for
 Planning and Infrastructure

FIGURE 10

DPI INTERNAL USE ONLY

11/08/06 Issues:

T Howewling.

- Written report not available
- Vic Semerick
'not reasonably sig wetland.'

POSITION: Considered as a whole

Total area \approx 60ha ie small BUT
one of the larger areas of its
type.

↳ has poor land mangers, private
conservation

POSITION 'large' block

Inference is we
are NOT esteemed members
of the community!!

Do we have the opportunity
to defend the libelous
comments made about our
'reported' statements and work...
* ie by submitters

Answers to Peter Robinson's Position

In our time with Peter
Robinson we listened and gave
him clear, honest advice and what we
assessed our views of
the land.

We clearly said we would
be honest but our advice
to the decision would be no

~~But~~
~~you~~
~~time~~
consistent
DOE
Honest
Shine
EPA
Land owner
etc
etc
Do ~~nothing~~
nothing
nothing

Notes to
John Pade

1

Comment on flora/vegetation items

1

This study was a conservation appraisal of remnant native vegetation of the alluvial soils eastern side of the Swan Coastal Plain between Pinjarra and Gingin. The study was initiated by the Department of Conservation and Land Management, and funded by the Australian Heritage Commission, due to concern as to the high level of clearing of the eastern side of the Plain. Most remnants on the east of the Plain were described and compared on their flora and conservation values in this project. The report consolidated information on the outstanding flora and vegetation biodiversity values of the eastern side of the Plain and was a base report use in planning of further work on the Swan Coastal Plain. V&C Semeniuk Research Group consulted this report in their work on the mapping and describing the wetlands on the Plain.

Lot 295 was identified as part of the Location 39 (Map 1 and 2). The vegetation and flora of the Location were described and the vegetation units mapped from aerial photography interpretation and a field inspection of Reserve 45957. Two reference points were described in Reserve 45957 (Map 2).

2

In 1994 the Department of Environmental Protection initiated an update of the System 6 and Part System 1 area, with a focus on the Swan Coastal Plain. The techniques and classification approach developed for the determination of the regional floristic groups of the Swan Coastal Plain in the report *A Floristic Survey of the Southern Swan Coastal Plain* (Gibson et al 1994) were used to describe and compare areas of remnant native vegetation. Work in 1994 for the Update focused on areas identified in the System 6 and 1 reports and in 1995 submissions made to the Update.

Location 39 was listed as 'Submission 98 Hampton Road bushland, Pinjarra'. As a consequence permission was obtained to enter the reserves/lots in the submission area (follow up letter to Homeswest 8 December 1995). Four 10X10m plots were located and described in the submission area on the basis of information in Keighery and Trudgen (1994), aerial photography interpretation, soils/geomorphological mapping and transects of the area. These plots were compared with over 1000 other plots on the Plain between Moore River and Dunsborough and four regional floristic groups were identified (DEP 1996 and Government of WA 2000). This work built on the information in Keighery and Trudgen (1994) and established the following. Volunteers from RAOU (now Birds Australia) made recordings of the birds in the area as part of this work.

Vegetation/Flora

At least four regional floristic groups were located in the area, being:

Supergroup 2: Seasonal Wetlands4 *Melaleuca preissiana* damplands

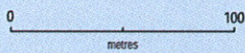
5 Mixed shrub damplands

12 *M. teretifolia* and / or *Astartea* aff. *fascicularis* shrublands**Supergroup 3: Uplands, centred on Bassendean Dunes and the Dandaragan Plateau**21a Central *Banksia attenuata* - *E. marginata* woodlands

Eight species of significant flora were identified in the area, being: *Stylidium longitubum* (Priority 3), *Stylidium mimeticum* (Priority 3), *Rhodanthe pyrethrum* (Priority 3), *Myriophyllum echinatum* (Priority 3), *Aponogeton hexatepalus* (Declared Rare Flora), *Stylidium utricularioides*, *Acacia lasiocarpa* 'Pinjarra Form' (Note this is 1996 data and



WETLANDS
LOT 295 (V.SEMENIUK)



Aerial Photography - ortho rectified
 Original photography - Department of Land Information (DLI)
 Flown: December 2004 Scale 1:20000
 Positional accuracy +/- 4 metres

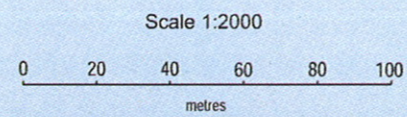
W295_wetlands.dgn
 28 Jul 2008

Prepared by Stalkery Mapping Services, Spatial Information & Remuneration - Mapping & Geospatial Data,
 Department for Planning and Infrastructure, on behalf of the Western Australian Planning Commission, Perth WA.
 Base information supplied by DLI PA 23 2003

FIGURE 11



**COMPOSITE PLAN LOT 295
 VEGETATION COMMUNITIES (L. STEPHENS)
 VEGETATION CONDITION (L. STEPHENS)
 WETLANDS (V. SEMENIUK)**



Aerial Photography - ortho-rectified
 Original photography - Department of Land Information (DLI)
 Flown: December 2004, Scale 1:20000
 Positional accuracy 10m - 4 metres
 162765_composite.dgn
 28 Jul 2006
 Produced by: Statutory Mapping Section, Spatial Information & Research - Mapping & Geospatial Data,
 Department for Planning and Infrastructure, on behalf of the Western Australian Planning Commission, Perth WA
 Base Information supplied by DLI PA 23-2003

FIGURE 12

**DRAFT RECOMMENDATIONS FOR
DETERMINATION OF SUBMISSIONS**

**PRS AMENDMENT NO. 012/33A
DRAFT SUMMARY OF SUBMISSIONS**

Submission: 3

Submitted by: Mr Ron Robertson

Nature of Interest: Pinjarra resident

Affected Land: Lots 295, 350 & 354 Alderson Street and Lots 299 & 309 Hampton Road

Summary of Submission:

1. The economic return from this land will be of far more use to the Shire of Murray if it is developed than if it is retained as bushland. (eg. rates, money for local businesses and the area, i.e. schools, sporting bodies). Economic return from open space areas is low unless there are attractions such as mountains and gorges. Also, small open space areas add costs to the local government for management.
2. Lots 299, 309, 350 & 354 should be sold and the money used to build a viable Aboriginal heritage/cultural centre on Reserve 31032 (where the Battle of Pinjarra took place). This centre will be of more benefit to the Aboriginal community than a few acres of bush.
3. This is another example of Pinjarra and the Shire of Murray being unfairly treated. This imbalance needs to be considered in order for development in the Shire.
4. According to *The Western Australian*, Ms MacTiernan has advised that 60% of all future residential development will be within existing cities, leaving 40% in the remainder of the State. We need development away from the coast and housing costs kept down.
5. Rare plants are stated as a reason why these lots should be reserved as ROS. How rare are these plants and what are they called? I have never been able to find these anywhere, or anyone who can name them.
6. Lot 295 was sold by the Department of Housing and Works (DHW) about three years ago. However, the *amendment report* states the land was known as a *Natural Resource Protection Area* in 1997. Why was the land sold? Was it wrong to sell it? The *amendment report* never mentions that this land was sold quite recently.

Planning Comment:

1. While financial matters receive appropriate consideration, economic return is not the principal determinant in relation to the reservation of land for Regional Open Space (ROS). In this case, the value of the land for ROS purposes relates to its value for conservation purposes, Aboriginal culture and regional landscape.
2. The locations comprising Lots 299, 309, 350 & 354 and Reserve 31032 both have specific significance in terms of indigenous history and culture and both need to be protected by ROS reservations. Bushland holds significance in Aboriginal culture.
3. The interests of Pinjarra are not measured only in relation to the amount of development that may occur but in terms of the overall balance and structure of land use. As part of the overall land use pattern, reservation of this land for Regional Open Space will be in the long term interest of Pinjarra, through the benefits referred to in (1), above.
4. Considerable areas have been identified for residential development within the Shire of Murray, including Pinjarra. Also, see 3, above.
5. The reasons for reservation of the land relate to its values for conservation purposes, Aboriginal culture and regional landscape. In relation to just conservation values, the area subject of the proposed amendment is significant because it contains significant remnant vegetation, upland and wetland areas and rare and other significant flora. A series of publications, publicly-available reports and websites describe and map the vegetation complexes and significant flora of the Swan Coastal Plain, including Heddle *et al* 1980, Keighery and Trudgen 1992, Gibson *et al* 1994, *Bush Forever*, the DEC Florabase website and the WALGA Perth Biodiversity Project website. The particular species on the overall PRS amendment site have been identified in the *System 6 Update Survey Programme, 1995* and recent surveys of Lot 295 by Landform Research.
6. Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land within the Regional Open Space reservation.

For information, Department of Housing and Works has advised that the contract documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

Determination:

1. Dismissed.
 2. Dismissed.
 3. Dismissed.
 4. Noted.
 5. Noted.
 6. Noted.
-

Submission: 5

Submitted by: Mr Tim Houweling of *cornerstone legal* on behalf of Ifafa Pty Ltd and Peter John and Yvonne Robertson

Nature of Interest: Legal representative for owners of Lot 295

Affected Land: Lot 295 Alderson Street, Pinjarra

Summary of Submission:

1. Inclusion of Lot 295 as a wetland by the Department of Environment (DoE) is based on mapping undertaken for *Wetlands of the Swan Coastal Plains*. This mapping used a broad based approach and for that reason can be reviewed by the DoE. *Wetlands of the Swan Coastal Plains* can not be relied upon as errors have been found in the methods used to gather and record information.
2. Two environmental reviews of the subject land have been undertaken on behalf of the owners :
 - (i) Mr Lindsay Stephens (of Landform Research); and
 - (ii) Dr Vic Semeniuk (V & C Semeniuk Research Group).

Dr Semeniuk and Mr Stephens agree to a regionally significant wetland on the western boundary of Lot 295 and Dr Semeniuk identifies two additional regionally significant wetlands on the land.

It is evident from the reviews by Mr Lindsay Stephens and Dr Semeniuk that inclusion of Lot 295 within ROS for wetland purposes has not been supported by a ground analysis.

3. Areas not environmentally significant or with no regional features should not be reserved as ROS. If the Western Australian Planning Commission includes areas as ROS with no evidence supporting their inclusion, then a review by way of Writ of Certiorari in the Supreme Court is available.
4. Quite clearly, a Writ of Certiorari is not the preferred option and the owners of Lot 295 are prepared to have portions of their land reserved as ROS where the balance is zoned for urban development.
5. The land was sold by the DHW concealing the fact that it was, or may have been considered environmentally significant.
6. At the hearing, we reserve the right to present further evidence as a result of our Freedom of Information requests, and additional time is requested rather than a brief hearing.

7. There is no evidence to suggest the land should be included within ROS and no detailed on-site assessment has been undertaken (apart from those by Mr Lindsay Stephens and Dr Vic Semeniuk on behalf of the owners).
8. To include Lot 295 within the ROS reservation on the basis that it is considered regionally significant for environmental reasons would be an error of law reviewable by the Supreme Court.

Planning Comment:

1. The wetlands on Lot 295 have been reviewed, in terms of both delineation and evaluation, on several occasions since mapping for the publication *Wetlands of the Swan Coastal Plain* was undertaken. These reviews include the following :
 - Wetland Assessment for Lot 295 Alderson Street, Pinjarra by Landform Research in support of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171;
 - Review of Geomorphic Wetlands Swan Coastal Plain Dataset for Lot 295 Alderson Street, Pinjarra conducted by the Department of Environment in response to a request for reclassification by the landowners' planning consultant;
 - Investigations for the formal Environmental Assessment of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171; and
 - Report on the Wetlands, Lot 295 Alderson Street, Pinjarra by V & C Semeniuk Research Group, commissioned in support of this submission on Peel Region Scheme Amendment 012/33A.

Notwithstanding any variation in detail between the subsequent reviews, all conclusively indicate the presence of regionally significant wetlands on Lot 295.

2. The conservation value of wetlands on Lot 295 is not the only reason for the proposal to include this land in the Regional Open Space reservation. Reservation of the area subject of PRS Amendment 012/33A has been proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape. The conservation values of Lot 295 relate to the presence of wetlands, uplands, remnant vegetation (range and quality) and wildlife habitat. All parts of Lot 295 require protection in relation to some or all of these values. In regard to wetlands only, assessments by the consultants commissioned by the landowners and ground analysis by experts from State government agencies all show that regionally significant wetlands exist on Lot 295.
3. Land may be included within the Regional Open Space reservation under the Peel Region Scheme for the purposes set out in clause 10(a) of the Peel Region Scheme. This states that the purpose of the reservation is to protect the natural environment, provide recreational opportunities,

safeguard important landscapes and provide for public access. Comments regarding possible legal options are noted.

4. Most of Lot 295 has conservation values relating to both wetlands and remnant vegetation together with landscape values relating to the whole of the site. Use of any portion of Lot 295 for urban development would conflict with conservation, recreation and landscape values that would be available through the assemblage of a contiguous 43 hectare area of regional open space comprising a combination of wetlands and uplands, including a range of vegetation types and habitat values.

Moreover, the inclusion of urban uses within Lot 295 would have a detrimental effect upon the condition of the wetlands and vegetation within Lot 295 in terms of edge effects and management problems.

5. Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land within the Regional Open Space reservation.

For information, the contract documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

6. Noted. Additional time has been allocated.
7. Reservation of the area subject of PRS Amendment 012/33A was proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

In a purely environmental context, the area subject of the amendment is considered locally and regionally significant because of the quality and range of vegetation types, including both wetland and upland areas, the presence of significant and rare flora, and its wildlife habitat value. This significance of these considerations is greatly increased by the amount of clearing that has taken place in the area and by the presence of Conservation Category Wetlands on Lots 295 and 350.

Lot 295 has self-evident landscape value. Successive reviews over the past fourteen years have reiterated the conservation values of the land. In this respect, Lot 295 has been inspected by numerous experts (including Mr Stephens and Dr Semeniuk) on numerous occasions.

8. See 3, above.

Determination:

1. Noted.
2. Dismissed.
3. Noted.
4. Noted.
5. Dismissed.
6. Noted.
7. Dismissed.
8. Dismissed.



Cadastre

2006 Metro/Peel Aerial Photography

0 Scale 1:6,000 125 m

Prepared by: dsanderson
Prepared for: Hearings Committee
Date: Friday, July 28, 2006 15:11
Plot identifier: P20060728_1511

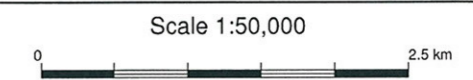


Department for
Planning and Infrastructure

DPI INTERNAL USE ONLY



2005 Metro/Peel Aerial Photography



Prepared by: dsanderson
Prepared for: Hearings Committee
Date: Thursday, July 27, 2006 13:50
Plot identifier: P20060727_1350



DPI INTERNAL USE ONLY



Western Australian Planning Commission

DEPARTMENT OF ENVIRONMENT
& CONSERVATION
27 JUN 2007
Corporate Information Section
ATRIUM



**Peel Region Scheme
Amendment 012/33A
(minor amendment)**

Regional open space - West Pinjarra

Shire of Murray

**Report on Submissions
Submissions
Transcripts of Public Hearings**

June 2007

Mandurah
Western Australia



Government of
Western
Australia



Western
Australian
Planning
Commission
50 *spatial planning*
years

**Peel Region Scheme
Amendment 012/33A**

Regional open space - West Pinjarra

**Report on Submissions
Submissions
Transcripts of Public Hearings**

Shire of Murray



June 2007

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Published by the
Western Australian Planning Commission,
Albert Facey House,
469 Wellington Street,
Perth WA 6000

PRS Amendment 012/33A. Report on Submissions
File 833-6-16-8
Published June 2007

ISBN 0 7309 9608 5

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This document is available in alternative formats on application to WAPC Communication Services.

Contents

	Abbreviations	v
1	Introduction	1
2	The proposed amendment	1
3	Environmental Protection Authority advice	2
4	Call for submissions	2
5	Submissions and hearings	2
6	Matters raised in submissions	3
7	Government agencies and local government	4
8	Hearings.....	5
9	Determinations	7
10	Conclusion and recommendations	8
Appendix 1	Proposed amendment as advertised	
Appendix 2	List of detail plans as advertised	
Appendix 3	Submissions	
Appendix 4	Transcript of hearings	
Schedule 1	List of submissions	
Schedule 2	Summary of submissions and determinations	

Abbreviations

CALM	Department of Conservation and Land Management
DEC	Department of Environment and Conservation
EPA	Environmental Protection Authority
PRS	Peel Region Scheme
WAPC	Western Australian Planning Commission

Amendment 012/33A to the Peel Region Scheme

Regional open space - West Pinjarra

1 Introduction

At its meeting on 19 August 2005, the Western Australian Planning Commission (WAPC) resolved to proceed with amendment 012/33A to the Peel Region Scheme (PRS) in accordance with the provisions of section 33A of the *Metropolitan Region Town Planning Scheme Act*. Section 33A provides for a truncated process for those amendments to the PRS which in the opinion of the WAPC are not substantial. The amendment is now subject to the provisions of sections 57 to 62 of the *Planning and Development Act 2005* which was promulgated in April 2006 and takes the place of the earlier legislation.

2 The proposed amendment

The purpose of this amendment is to include Lots 295, 350 and 354 Alderson Street, Lots 299 and 309 Hampton Road, and portion of the Alderson Street road reserve, Pinjarra, in the regional open space reservation. This would bring together 43 hectares of contiguous land with high value for vegetation and wetland conservation, indigenous heritage and culture, and regional landscape (Appendix 1).

In the environmental context, the amendment area is considered locally and regionally significant because of the quality and range of vegetation types, including both wetland and upland areas, the presence of rare flora, as well as its wildlife habitat value. This significance is greatly increased by the amount of clearing that has taken place in the surrounding district and by the presence of conservation category wetlands on Lots 295 and 350.

The whole of the land subject to the amendment has significance to the indigenous community in terms of its heritage and natural values. In addition to the indigenous attachment that applies to the locality, the amendment site holds significance for the local indigenous community. In this respect, local Aboriginal people inhabited Lots 299, 309 and 354, which was the location of an indigenous camp over a long period. Also, food gathering took place in the surrounding area (particularly Lot 350) and a women's meeting place was located on Lot 295.

The land also has significance in terms of landscape, deriving from the vegetation and wetland areas that exist on the land. As with the environmental values, the significance of this landscape value is accentuated by the amount of clearing that has taken place in the surrounding district. These landscape values will become increasingly significant as further development takes place in the Peel region.

The proposal is described in the WAPC's amendment report, as advertised for public submissions and published in October 2005.

3 Environmental Protection Authority advice

The proposed amendment was referred to the Environmental Protection Authority (EPA) for advice on whether an environmental assessment would be required.

The EPA has advised that the overall environmental impact of the amendment would not be severe enough to warrant assessment under Part IV of the *Environmental Protection Act 1986* and that it is not necessary to provide any advice or recommendations.

4 Call for submissions

The proposed amendment was advertised in the *Government Gazette* on 18 October 2005 and remained open for public submissions until 19 December 2005, a period of two months.

The proposed amendment was made available for public inspection during ordinary business hours at :

- the offices of the Department for Planning and Infrastructure (Perth and Mandurah)
- the municipal offices of the Shire of Murray
- the State Reference Library, Northbridge.

During the public inspection period, notice of the amendment was published in *The West Australian* and local newspapers circulating in the district.

The amendment report was published and issued free on request.

5 Submissions and hearings

Six submissions on the amendment were received by the close of advertising and one late submission was also received. An index of all persons and organisations who lodged submissions is included at Schedule 1. A summary of the submissions is included in Schedule 2. A full copy of all submissions is contained in Appendix 3.

In agreeing to allow the WAPC to conduct amendments through the procedure set out in section 33A of the Metropolitan Region Town Planning Scheme Act 1959, the Minister for Planning and Infrastructure requested that procedures be put in place to conduct hearings, where requested by those making submissions.

Two submissions requesting hearings were received.

The Peel Region Planning Committee, under delegated authority from the WAPC and following preliminary consideration of the matters raised in the submissions, resolved to form a committee to hear these submissions, comprising the following members :

- Cr Patricia Creevey – Mayor, City of Mandurah and Member, Peel Region Planning Committee
- Cr Noel Nancarrow – Shire President, Shire of Murray and Member, Peel Region Planning Committee
- Cr Paul Fitzpatrick – Councillor, Shire of Waroona and Member, Peel Region Planning Committee
- Mr Colin Sanders – independent member (environmental expert).

Those who made submissions were invited to present their submission to the hearings committee. Submissions could be heard in public or private. In this respect, public hearings were requested by two parties :

- Mr Ron Robertson, a Pinjarra resident
- Ifafa Pty Ltd and P J & Y Robertson (owners of Lot 295 Alderson Street, Pinjarra) who were represented by Mr Tim Houweling of Cornerstone Legal and Mr Peter Robertson.

These hearings were held on Friday 11 August 2006.

6 Main issues raised in submissions

In total, seven submissions were received on the amendment; three from State government agencies, one from the Shire of Murray, two from Pinjarra residents and one from the owners of Lot 295.

Submissions from State government agencies and the Shire of Murray are discussed in section 7.

A submission was received from the owners of a nearby property (Lot 7 Alderson Street), John and Deanne Hazelden, who neither supported nor objected but provided comments. These comments relate to future pedestrian/cycle access, drainage matters, fire management and vehicle access. These matters have been noted for consideration when management arrangements are put in place.

Another submission was received from Ron Robertson, a Pinjarra resident, who objects to the amendment. Mr Robertson's submission conveys views that the amendment lacks economic merit, proposing sale of the amendment site and dedication of the proceeds to another site with indigenous significance ('Battle of Pinjarra' site) and the need for development in the Shire of Murray. He also queries the presence or otherwise of rare plants on the amendment site and queries matters relating to the sale of Lot 295 by the Department of Housing and Works.

A third submission was received on behalf of the owners of Lot 295 Alderson Street (Ifafa Pty Ltd and Peter and Yvonne Robertson) who also objected to the amendment. Their objection was based on the following grounds (summarised) :

- Inclusion of Lot 295 as a wetland has been based on generalised mapping that can not be relied on;
- It is evident from expert reviews commissioned by the owners that reservation of Lot 295 is not supported by ground analysis;
- Areas not environmentally significant or with no regional features should not be reserved as regional open space;
- Lot 295 was sold by the Department of Housing and Works concealing the fact that it was, or may have been considered environmentally significant;
- There is no evidence to suggest Lot 295 should be included in regional open space and no detailed on-site assessment has been undertaken (apart from experts commissioned by the owners).

Copies of the submissions are contained in Appendix 3.

7 Government agencies and local government

Three submissions were received from State government agencies; two from branches of the Department of Indigenous Affairs and one from the (then) Department of Conservation and Land Management (now Department of Environment and Conservation). These agencies have responsibilities in relation to Lots 299, 309, and 354 and Lot 350 which are Crown land vested in the Aboriginal Lands Trust and CALM, respectively. Both departments support the amendment.

The Shire of Murray objects to the inclusion of Lot 295 in the regional open space reservation, preferring the land to be rezoned to special rural with related land management controls for remnant vegetation and wetland protection. The council also expresses concerns about management arrangements for the land and advises that it would prefer Alderson Street to remain open (unconstructed) until it is clear how the area will be developed and what road network will be needed.

Copies of these submissions are contained in Appendix 3.

8 Hearings

Two of the seven parties who lodged submissions requested hearings. The transcript of the hearings is contained in Appendix 4. The hearings are discussed below :

Mr Ron Robertson

In keeping with the nature of hearings, matters raised by Mr Ron Robertson reiterated and expanded on matters raised in his written submission. In addition to these, Mr Robertson suggested it would be preferable, on completion of the life of the Alcoa Pinjarra alumina refinery, for the bauxite residue area to be 'rehabilitated' into parkland.

Mr Tim Houweling, Mr Peter Robertson and Mr David Marorana on behalf of the owners of Lot 295 Alderson Street

Mr Houweling stated that there is no argument that a portion of Lot 295 has regional significance. He then stated that scientific evidence alone should not be the approach but it should take into account what the community wants. Mr Houweling then raised queries relating to perceived irregularities relating to the sale of the land by the Department of Housing and Works and perceived inequities concerning the 'burden' of owning reserved land; in doing so, giving his view on the compensation process.

Mr Houweling claimed the landowners made enquiries with relevant agencies regarding the significance of Lot 295 and alleged they were informed that it was likely the land would be rezoned to urban. He also claimed the owners made enquiries of other government agencies, including CALM, and alleged that they were told there was nothing significant about the land.

Mr Houweling queried the merit of the assessment of Lot 295 in the publication *Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain* (Keighery and Trudgeon, 1992) and stated the view that current studies should be relied on to determine whether or not the vegetation should be preserved.

Mr Peter Robertson stated that all possible checks were made before the land was purchased. In this respect, he advised that he had at least five meetings with senior officers of the Shire of Murray who helped him draw lines, showing how the land could be subdivided. He further stated that, in their understanding, the Shire officers' information was that the land was allocated for future urban expansion. He also stated that there was "no mention ever that we would have this kind of difficulty, or that it was this significant".

Mr Peter Robertson also suggested that, when meeting representatives of a government department at the property, there was prejudice in relation to the assessment of the site and that little time may have been spent examining the land. In turn, he queried the existence of scientific proof of rare flora on Lot 295.

Mr Peter Robertson then spoke of the financial burden of acquiring Lot 295, advising that he and his partner each pay \$1000 per month in interest.

Mr Houweling then stated that the landowners had invited the elder of the local Aboriginal community, the late Mr Joe Walley, to visit the site, and that he had advised it would be sufficient if a plaque recognising the indigenous significance could be placed somewhere on the site.

Mr Houweling stated that his party accepts the conclusions reached by Dr Vic Semenuik, an environmental consultant commissioned by the landowners to review wetland values on Lot 295. In turn, he queried the merit of reserving 'Wetland 1'.

Mr Houweling made the point that if land is included in regional open space, a person then has the opportunity of at least claiming compensation. He then made the point that there is a dilemma for the owner if the land is not included as regional open space and (yet) it is considered by a government agency that it can not be developed.

Mr Houweling then advocated that certain areas of Lot 295 do not need to be preserved according to cadastral boundaries, stating that government is a bad land manager and, in turn suggesting that, if the land were subdivided, opportunities would exist for preserving the land by private mechanisms.

Mr Houweling suggested that, if the hearings committee considers a section of Lot 295 is regionally significant, "which we accept they probably must", his party considers subdivision of the balance of the land ought to be permitted, with preservation via private mechanisms.

Mr Mariorana advised his firm had been engaged by Mr Peter Robertson after the purchase of Lot 295. He then outlined its role in relation to the land. Mr Mariorana advised that a number of designs were driven to some extent by the council's strategic view of the land. He referred to the preparation of an application to rezone the land for rural residential purposes, reviewing the planning framework for the land and the opportunities over the land in the context of studies that had been done, including studies completed by the environmental consultants commissioned by the owner. He stated that his firm saw there would be every likelihood that the land could be used for urban development and has also examined special residential options.

The hearings committee considered the submissions and the matters raised at the hearings, and resolved to advise the WAPC that it was unable to provide a unified recommendation on the proposal to include Lot 295 in the regional open space reservation.

9 Determinations

The submissions, transcripts of the hearings and the recommendation of the hearings committee have been considered and the WAPC has resolved to determine the submissions in the manner set out in Schedule 2 and has determined that the amendment should proceed.

The matters raised in Mr Ron Robertson's submission are addressed in Schedule 2. Additionally, while 'rehabilitation' of the Alcoa Pinjarra bauxite residue area is a valid long term consideration that has been the subject of ongoing discussion, such rehabilitation could not replicate the wetland and vegetation complexes contained on the amendment site.

Matters raised in the hearing on behalf of the owners of Lot 295 Alderson Street included advice received from public authorities, a dialogue between Mr Peter Robertson and a government agency, and claimed financial burdens. These matters are not issues that affect the WAPC's consideration of the inclusion of Lot 295 in the regional open space reservation.

The WAPC notes the statements by Mr Houweling that current studies should be relied on to determine whether vegetation should be preserved, as well as his acceptance of the conclusions of Dr Vic Semenuik in regard to wetland values on Lot 295. In this respect, the WAPC considers the information contained in the environmental reports commissioned by the landowners reinforces the basis on which reservation of the land was proposed. The WAPC considers compilation of this information demonstrates that a high proportion of Lot 295 contains either wetlands, vegetation, or both, with a level of significance that justifies its preservation in conjunction with the remainder of the overall amendment site.

Further in this respect, the WAPC considers that the proportion of Lot 295 that may have lower wetland or vegetation values is insufficient for rural residential development when buffers are taken into account. Moreover, such development would lead to undesirable edge effects, to the detriment of the high natural values on the greater part of the land.

The WAPC notes Mr Houweling's concern that a landowner is faced with a dilemma if land is not included as regional open space while, at the same time, it is determined that it can not be developed (ie. that there is no right to claim compensation). In this respect, the WAPC

also notes that the Minister for the Environment has determined under section 48A(2)(b) of the *Environmental Protection Act 1986* that amendment 171 of the Shire of Murray Town Planning Scheme No. 4 (which proposed rezoning Lot 295 for rural residential purposes) should not be implemented. However, the amendment does propose to include the land in the regional open space reservation.

Therefore, in addition to preserving the respective values of the land - ie. vegetation and wetland conservation, indigenous heritage and culture, and regional landscape - inclusion of the land in the regional open space reservation will provide the landowners with the right to claim compensation.

10 Conclusion and recommendation

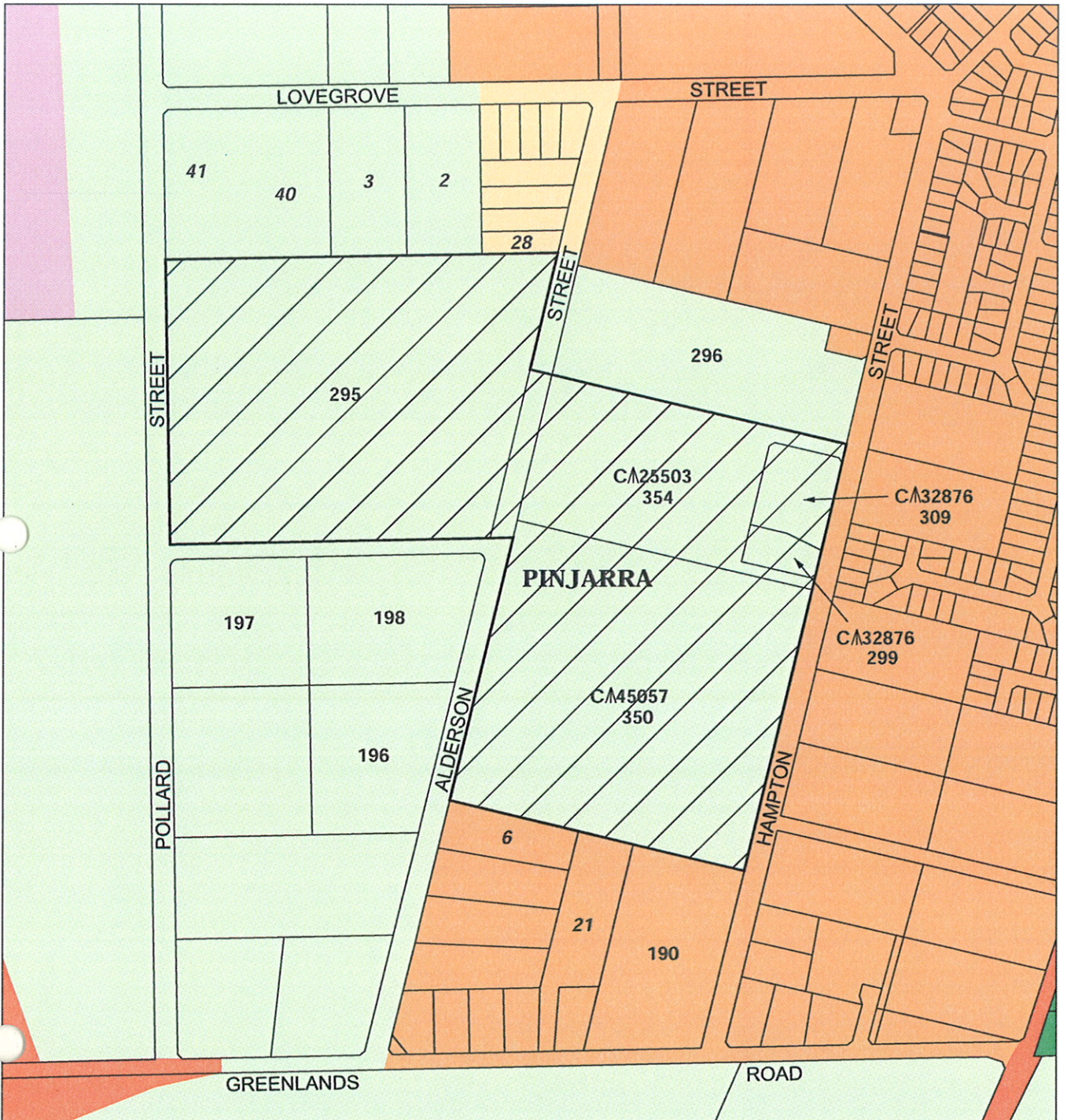
This report summarises the history and background to the amendment and examines the submissions received. The WAPC thanks all those who made a submission.

After considering the submissions, the WAPC is satisfied that the amendment should be approved and finalised, as discussed in sections 6 to 9 and Schedule 2.

The WAPC recommends the Minister for Planning and Infrastructure approve the amendment, as advertised.

Appendix 1

Proposed amendment as advertised



PEEL REGION SCHEME - REGIONAL OPEN SPACE - WEST PINJARRA

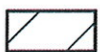
19 AUGUST 2005

AS ADVERTISED

FIGURE 1

LEGEND

PROPOSED:



REGIONAL OPEN SPACE RESERVATION

EXISTING:



INDUSTRIAL ZONE



REGIONAL OPEN SPACE RESERVATION



URBAN ZONE



RURAL ZONE



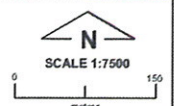
URBAN DEFERRED ZONE



PRIMARY REGIONAL ROADS RESERVATION

2443bw1.fig
10 Aug 2005

Source: cadastre based on information provided with the permission of DLI PA 23-2003
Produced by Statutory Mapping Section, Spatial Information & Research - Mapping & GeoSpatial Data,
Department for Planning and Infrastructure, on behalf of the Western Australian Planning Commission, Perth WA



Appendix 2

List of detailed plans as advertised

Peel Region Scheme
Proposed Amendment 012/33A - as advertised
Regional open space - West Pinjarra
3.2036

Detail plans

1.4178/2 - Regional open space - West Pinjarra **Proposal 1**

Appendix 3
Submissions



ENQUIRIES: Monique Pasqua 9235 8083
OUR REF: 02/1009 I:\dms\open\map\map18561.doc
YOUR REF: 833/06/16/0004PV

1

Mr R N Stokes
Acting Secretary
WA Planning Commission
Unit 2B 11-13 Pinjarra Road
MANDURAH WA 6210

Dear Mr Stokes

Proposed Peel Region Scheme Amendment No 012/33A: Aboriginal Heritage Issues

I refer to your letter and attachments dated 17 October 2005 regarding the above.

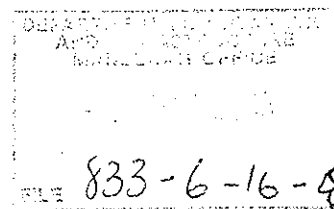
Please find enclosed the results of a search conducted of the Site Register maintained by the Department of Indigenous Affairs for the general areas covered by the Scheme Amendment. As the results indicate there are a number of previously recorded heritage sites in the project area.

In terms of Aboriginal heritage issues I wish to provide the following general advice. Prior to any proposed development/activity, so that no site is damaged or altered [which would result in a breach of Section 17 of the *Aboriginal Heritage Act 1972*], it is recommended that suitably qualified consultants be engaged to conduct ethnographic and archaeological surveys of the area. This should ensure that all Aboriginal interest groups are consulted so that all sites on the designated land are avoided or identified. Such a survey would involve archival research, consultations and on the ground inspections.

It is our preference that any development plans are modified to avoid damaging or altering any site. If this is not possible in order to avoid a breach of the Act, the land owner should submit a Notice in writing under Section 18 of the Act to the ACMC, seeking the Minister for Indigenous Affairs' prior written consent to use the land.

Yours sincerely

Monique Pasqua
SENIOR HERITAGE OFFICER
1 November 2005





REGISTER OF ABORIGINAL SITES



Search Criteria

Easting: 393499mE; Northing: 6388049mN; Zone: 50
 Easting: 393112mE; Northing: 6388144mN; Zone: 50
 Easting: 393195mE; Northing: 6388492mN; Zone: 50
 Easting: 392735mE; Northing: 6388489mN; Zone: 50
 Easting: 392725mE; Northing: 6388863mN; Zone: 50
 Easting: 393244mE; Northing: 6388870mN; Zone: 50
 Easting: 393209mE; Northing: 6388717mN; Zone: 50
 Easting: 393632mE; Northing: 6388614mN; Zone: 50

Disclaimer

Copyright in the information contained herein is and shall remain the property of the Government of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register of Places and Objects (often known as the 'Sites Register') established and maintained under the *Aboriginal Heritage Act 1972* (AHA).

Aboriginal sites exist that are not recorded on the Sites Register, and some registered sites may no longer exist. Consultation with Aboriginal communities is on-going to identify additional sites. The AHA protects all Aboriginal sites in Western Australia whether or not they are registered.

Legend

Status	Access ("Acc")	Restriction ("Res")	I/NA
I Interim	C Closed	N No Restriction	I Insufficient Info
P Permanent	O Open	M Male Only	NA Not a Site
S Stored Data	V Vulnerable	F Female Only	

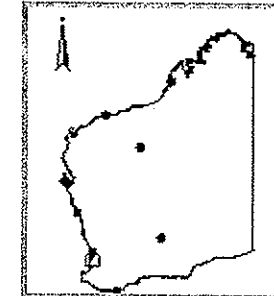
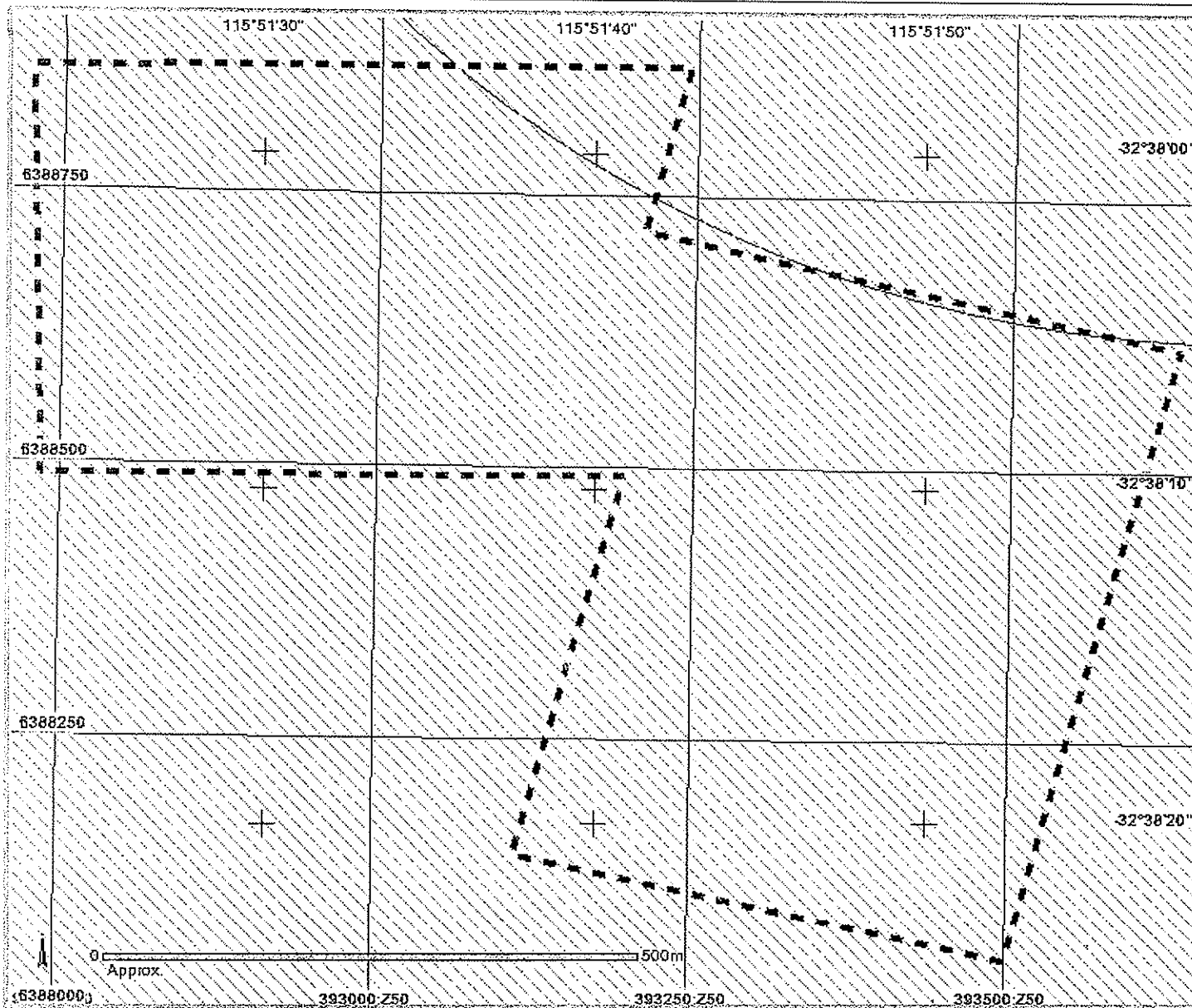
Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '5000000:Z50' means Easting=5000000, Zone=50.

Reliable ("R") - The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.

Unreliable ("U") - The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.

Site ID	Status	Acc	Res	Site Name	Resolution	I/NA	05	39	Site Type	Additional Information	Informants	Recorders	Easting Northing	Field Code	Site No.
3291	I	O	N	PINJARRA.	00088	I			(Artefacts / Scatter)	(Camp), [Other: ?]			395140mE 6385148mN Z50 U		S00187
3682	S	O	N	PINJARRA ABORIGINAL RESERVE.					Camp, Hunting Place	Date: 15/06/1985 Primary: [Walley, Joe (Mr)] Or [Kearing, Theo (Mr)]			393679mE 6389528mN Z50 U		S02233
3875	I	O	N	PINJARRA BURIAL	00088	I			Skeletal material/Burial				395140mE 6385148mN Z50 U		S01845

REGISTER OF ABORIGINAL SITES SITE SEARCH MAP



Legend

- Selected Site
- Town
- Map Area
- Search Area

Copyright for base map information shall at all times remain the property of the Commonwealth of Australia, Geoscience Australia - National Mapping Division. All rights reserved.

Copyright for Native Title Land Claim and Local Government Authority boundaries shall at all times remain the property of the State of Western Australia, Dept of Land Information. All rights reserved.

Copyright for Mining Tenement boundaries shall at all times remain the property of the State of Western Australia, Dept of Industry and Resources. All rights reserved.

3 Aboriginal Heritage Sites found in Polygon

Coordinates:

Easting	Northing	Zone
393499	6388049	50
393112	6388144	50
393195	6388492	50
392735	6388489	50
392725	6388863	50
393244	6388870	50
393209	6388717	50
393632	6388614	50

2

Western Australian Planning Commission Act 1985
as read in the conjunction with the
Metropolitan Region Town Planning Scheme Act 1959

Peel Region Scheme
Amendment No. 012/33A
Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
MANDURAH WA 6210

Submission number
2

I/ JOHN + DEANNE HAZELDEN (Please print clearly)
(Name)

of 107 ALDERSON STREET PINJARRA Postcode 6208

Contact telephone number 9531 3440 Email

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

If Alderson St is not going to be connected can a walking/bicycle path be constructed to join them (Limestone or gravel)
Drainage needs to be fixed. Water runs from opposite side of Hampton Rd under the road then floods the south end of Lot 350 pushing into connecting blocks. The drain along Alderson St of Lot 350 is always blocked at the northern end because of cars and motorbikes crossing the drain.

Lot 350 also desperately needs burning it is a huge fire risk with undergrowth and with vehicles using it.

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE
14 DEC 2005
833-6-16-8PV (sr)

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number 295, 350 + 354 Street address ALDERSON STREET

Locality (suburb) PINJARRA

My interest is (please circle) owner/occupier registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission OWNER/OCCUPIER OF BLOCK NEAR LOTS CONCERNED

Peel Region Scheme
Amendment No. 012/33A
Hearing of Submissions

There will be an opportunity for people who have made written submissions to discuss matters they have raised in their submission by commenting in person to a Hearings Committee.

These hearings are arranged so that the Western Australian Planning Commission can listen to a person should they wish to explain or expand upon their written submission. In the case of a group, a spokesperson to represent the group must be appointed.

A hearing is intended for listening to points of view and planning rationale and is not a forum of general public debate.

All hearings are recorded and transcribed. The transcripts of 'private' hearings remain confidential. All written submissions, transcripts of public hearings and the Commission's report will become public documents.

You do not have to attend a hearing

The comments presented by you in this written submission will be considered.

Please complete the following (indicate by placing a tick in the appropriate box)

<input checked="" type="checkbox"/>	NO I do not wish to speak at the hearing (Please go to the end of the form and sign)
Or	
<input type="checkbox"/>	YES I do wish to speak at the hearings (If you have indicated yes please complete the following details. You will be contacted to arrange a time for your hearing)
	<u>I will be represented by</u>
<input type="checkbox"/>	Myself. My telephone number is (business hours)
Or	
<input type="checkbox"/>	My agent or spokesperson (an agent may be from a local group)
	Agent's name
	Agent's telephone number (business hours)
	Group's name
	Mailing address
	<u>I would prefer my hearing to be conducted in:</u>
<input type="checkbox"/>	Public (with a public hearing, other persons may attend)
Or	
<input type="checkbox"/>	Private (a private hearing is conducted behind closed doors and only people nominated by you and the Hearings Committee will attend. Material presented at a private hearing will remain confidential)

To be signed by person/s making the submission

Signed *A. Kelly* Date 12.12.05 Signed *D. H. Jordan* Date 12.12.05

Note: Submissions MUST be received by the advertised closing date, being close of business 5.00pm on Monday 19 December 2005. Late submissions will not be considered.

Contacts: Telephone 9581 4471. Fax: 9581 5491
Internet: www.wapc.wa.gov.au



Form 33A

Western Australian Planning Commission Act 1985
as read in the conjunction with the
Metropolitan Region Town Planning Scheme Act 1959

3

Peel Region Scheme
Amendment No. 012/33A
Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
MANDURAH WA 6210

Submission number
3

Name RON ROBERTSON (Please print clearly)
(Name)
of 32 RIVER DRIVE PINJARRA Postcode 6208
Contact telephone number 9531645 Email NONE

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

PLEASE SEE ATTACHED PAGES.

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE
15 DEC 2005
FILE 833-6-16-8P1V

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number 295, 350, 354, 309 Street address ROBERTSON STREET MILMINGTON ROAD
Locality (suburb) WEST PINJARRA

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission

**Peel Region Scheme
Amendment No. 012/33A
Hearing of Submissions**

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A hearing is intended for listening to points of view and planning rationale and is not a forum of general public debate.

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You do not have to attend a hearing

The comments presented by you in this written submission will be considered.

Please complete the following (indicate by placing a tick in the appropriate box)

<input type="checkbox"/> NO I do not wish to speak at the hearing (Please go to the end of the form and sign)
Or
<input checked="" type="checkbox"/> YES I do wish to speak at the hearings. (If you have indicated yes please complete the following details. You will be contacted to arrange a time for your hearing)
<u>I will be represented by</u>
<input checked="" type="checkbox"/> Myself. My telephone number is (business hours)
Or
<input type="checkbox"/> My agent or spokesperson (an agent may be from a local group)
Agent's name
Agent's telephone number (business hours)
Group's name
Mailing address
<u>I would prefer my hearing to be conducted in:</u>
<input checked="" type="checkbox"/> Public (with a public hearing, other persons may attend)
Or
<input type="checkbox"/> Private (a private hearing is conducted behind closed doors and only people nominated by you and the Hearings Committee will attend. Material presented at a private hearing will remain confidential)

To be signed by person/s making the submission

Signed..... *R. Robertson* Date *10-12-2005* Signed..... Date.....

Note: Submissions MUST be received by the advertised closing date, being close of business 5.00pm on Monday 19 December 2005. Late submissions will not be considered.

Contacts: Telephone 9581 4471. Fax: 9581 5491
Internet: www.wapc.wa.gov.au

IN THE ADVERTISEMENT PLACED IN THE MANDURAH COASTAL TIMES OCTOBER 26TH 2005 UNDER PUBLIC NOTICES, THE WEST AUSTRALIAN PLANNING COMMISSION STATES THAT IN ITS OPINION THE AMENDMENT IS NOT A SUBSTANTIAL ALTERATION TO THE PEEL REGION SCHEME

BUT IT IS A SUBSTANTIAL ALTERATION TO PINJARRA & THE SHIRE OF MURRAY & NEEDS TO BE LOOKED AT IN THIS CONTEXT.

ECONOMIC BENEFIT TO SHIRE:

THE ECONOMIC RETURN FROM THIS LAND WILL BE OF FAR MORE USE TO THIS SHIRE DEVELOPED THAN IT WILL EVER BE AS BUSHLAND.

THIS RETURN WOULD COME BY WAY OF RATES TO THE SHIRE, MONEY FOR LOCAL BUSINESS + THE AREA GENERALLY I.E. SCHOOLS, SPORTING BODIES

I HAVE VISITED MANY PARKS & BUSH LANDS THROUGH OUT AUSTRALIA. THEIR ECONOMIC RETURN TO THE COMMUNITY IS VERY LOW, UNLESS THEY ARE HUGE AREAS WITH MOUNTAINS, OR GORGES, SOMETHING TO ATTRACT TOURISTS THEY CANT SEE ANY WHERE ELSE

SMALL AREAS END UP BEING FIRE HAZARDS, VERMIN SANCTUARIES, & NOXIOUS WEED INFESTED.

THEY ARE AN ADDED COST TO SHIRES FOR WEED CONTROL, FIRE CONTROL, PREVENTION OF ILLIGIAL RUBBISH DUMPING

BENEFIT TO ABORIGINAL CULTURE.

IT IS MENTIONED IN THE AMENDMENT REPORT ~~PAGE~~
 PAGE NO2 PARAGRAPH NO3 UNDER SCOPE & CONTENT
 THAT CONSERVATION VALUES OF LOT 354 ARE LIMITED
 BUT COULD BE OF BENEFIT TO THE ABORIGINAL COMMUNITY
 IT ALSO STATES THE LAND COULD ACCOMMODATE SOME
 DEVELOPMENT ASSOCIATED WITH ABORIGINAL HERITAGE.

I PROPOSE THAT LOTS 354, 350, 309 & 299 BE
 SOLD. THE MONEY RECEIVED [WHICH WOULD BE
 SUBSTANTIAL] BE USED TO BUILD A VIABLE ABORIGINAL
 HERITAGE / CULTURAL CENTRE ON RESERVE NO 31032
 LOCATED ON SOUTH WEST HIGHWAY A MASON ROAD.

IT IS THE SITE REFERED TO AS WHERE THE BATTLE
 OF PINJARRA TOOK PLACE DURING THE EARLY DAYS OF
 WHITE SETTLEMENT

THIS WILL DO MORE FOR THE ABORIGINAL COMMUNITY
 THAN A FEW ACRES OF BUSH.

THIS CENTRE WAS PROPOSED BY THE PLED DEVELOPMENT
 COMMISSION IN 1999.

MURRAY SHIRE UNFAIRLY TREATED

THIS IS ANOTHER EXAMPLE OF DIFFERENT TREATMENT
 PINJARRA & THE MURRAY SHIRE RECEIVE COMPARED
 TO MANDURAH, THIS IMBALANCE NEEDS TO BE
 CONSIDERED FOR DEVELOPMENT TO GO AHEAD IN THIS
 SHIRE.

PREVIOUS PROPOSALS REFUSED THE GO AHEAD

1. TAPE COLLEGE + PERHAPS A UNIVERSITY AT FIBERTS ROAD TRANSFERRED TO MANDURAH BECAUSE OF PERCEIVED DRAINAGE PROBLEMS.
2. PRIVATE UNIVERSITY ON THE EASTERN SIDE OF THE ESTURY, NOT ALLOWED BECAUSE IT COULD DAMAGE THE ECHO SYSTEM, BUT ON THE WESTERN SIDE OF THE ESTURY DEVELOPMENT HAS GONE ON UNRESTRICTED
3. 100 YEAR FLOOD PLAN THIS IS CAUSING MAJOR COSTS FOR HOUSE PADS SOME UP TO 1.5M.

THE EFFECTS OF THE DECISIONS NEED TO BE TAKEN INTO ACCOUNT BY THE VARIOUS GOVERNMENT AGENCIES & THE PLANNING COMMISSION BEFORE DECISIONS ARE MADE.

FUTURE DEVELOPMENT IN THE STATE

ACCORDING TO A REPORT IN THE WEST AUSTRALIAN NEWS PAPER MR MC TWICKEN HAS SAID THAT FOR FUTURE DEVELOPMENT OF RESIDENTIAL LAND 60% WILL BE ALLOWED ONLY WITHIN EXISTING CITIES, LEAVING 40% FOR THE REST OF THE STATE.

THIS SHOULD NOT BE WE NEEDED DEVELOPMENT AWAY FROM THE COAST & TRY & KEEP COST OF HOUSING LAND DOWN.

RARE PLANTS.

RARE PLANTS HAVE BEEN MENTIONED ON PAGE NO 1 AS RARE FORA. AS ONE REASON WHY THIS LAND

SHOULD BE PRESERVED THERE ARE TO MANY EXAMPLES OF THIS WITHIN PINJARRA.

SOME PAST EXAMPLES OF RARE PLANTS BEING USED TO PREVENT DEVELOPMENT ARE:

1. THE EASTERN BY PASS AROUND PINJARRA.

MAIN ROADS NO1 OPTION NOT ALLOWED BECAUSE IT WOULD GO THROUGH A VERY SMALL AREA OF BUSH WHICH WAS SAID TO CONTAIN RARE PLANTS.

2. LAND IN PINJARRA'S LIGHT INDUSTRIAL AREA NOW CANT BE DEVELOPED BECAUSE IT IS SAID TO HAVE RARE PLANTS GROWING ON IT.

AN AREA OF LAND ADJACENT TO I.T. CANT NOT BE DEVELOPED EITHER FOR THE SAME REASON.

3. LOT 295 A BLOCK IN THE PROPOSAL CANT NOT BE DEVELOPED BECAUSE IT IS SAID TO HAVE RARE PLANTS GROWING ON IT.

WITH THESE RARE PLANTS GROWING EVERYWHERE HOW RARE ARE THEY & WHAT ARE THEY CALLED I HAVE NEVER BEEN ABLE TO FIND ANY WHERE OR ANY ONE WHO CAN NAME THEM?

LOT 295.

THIS PARCEL OF LAND WAS SOLD BY THE DEPARTMENT OF HOUSING & WORKS SOME THREE YEARS AGO. BUT IT IS STATED IN THE AMENDMENT REPORT PAGES NO1 + NO2 STARTING WITH

PARAGRAPH NO 3 IT TWICE MENTIONS THAT IT WAS KNOWN IN 1997 THAT THE LAND IS NATURAL RESOURCE PROTECTION AREA.

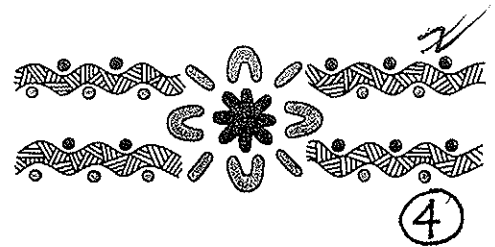
THIS THEN BEGS THE QUESTION WHY WAS THE LAND SOLD ? WAS IT WRONG TO SELL IT ?

FURTHER THE AMENDMENT REPORT STATES A NUMBER OF TIMES THE LAND IS IN PRIVATE OWNERSHIP.

IT NEVER MENTIONS THIS LAND WAS SOLD QUITE RECENTLY.

Reed Robertson.

14TH DECEMBER 2005.



ENQUIRIES: Beth Hughes 9235 8057

OUR REF: 01/0221-02

YOUR REF:



Anthony Muscara
Project Planner
Department for Planning and Infrastructure Mandurah
Unit 2B / 11-13 Pinjarra Rd
Mandurah WA 6210

Dear Anthony

Proposed Peel Region Scheme Amendment no. 012/33A Regional Open Space - West Pinjarra

The Department of Indigenous Affairs supports the proposed rezoning of Aboriginal Lands Trust (ALT) Reserves 25503 (Lot 354 Alderson St) and 32876 (Lots 299 and 309 Hampton Rd) from *Rural* to *Regional Open Space*.

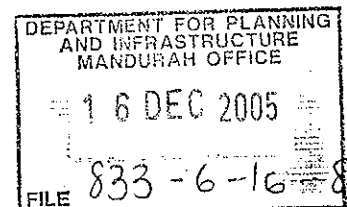
The reserves hold significant cultural and heritage values for local indigenous people and the rezoning will allow better protection of these values.

The proposal is also supported because the rezoning will not prevent future use of the area by the local indigenous community for activities such as cultural tours, interpretive centre, walk trails, and passive recreation.

Yours sincerely

Beth Hughes
LAND MANAGEMENT OFFICER
15 December 2005

cc: John Brinkman DIA Regional Manager Metro Wheatbelt



cornerstone legal

Lawyers
Tim Houweling
Warnar Spyker

5

1/300 Vahland Ave
Willetton WA 6155

Tel: 9259 5811
Fax: 9259 5866

Our Ref: TH:466
Your Ref:

Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
Mandurah WA 6210

12 December 2005

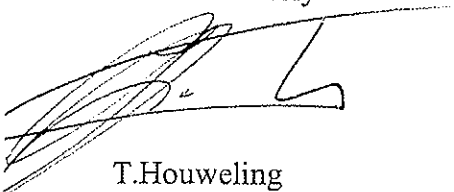
Dear Sir,

Lot 295 Alderson Street, Pinjarra

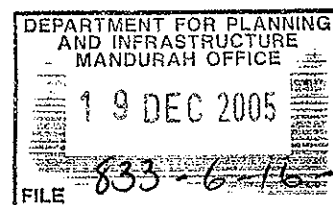
Please find enclosed a copy of our submissions in respect of the Peel Region Scheme.

We would be grateful if you could carefully consider the submission as we believe that it is likely that the Western Australian Planning Commission will make an error of law by the inclusion of this land as Regional Open Space because of environmental reasons as there is no evidence to bear this conclusion.

Yours sincerely



T.Houweling



SUBMISSION ON THE:

**PEEL REGION SCHEME AMENDMENT NO. 012/33A
REGIONAL OPEN SPACE – WEST PINJARRA**

ON BEHALF OF

IFAFA PTY LTD

BY

**CORNERSTONE LEGAL
BARRISTERS & SOLICITORS
1/300 VAHLAND AVE
WILLETTON WA 6155**

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE
19 DEC 2005
FILE 833-6-16-8PV

We act as solicitor to Ifafa Pty Ltd, Peter John and Yvonne Robertson, the owners of land described as Lot 295 Alderson Street, Pinjarra being the whole of the land contained within Certificate of Title Volume 1400 Folio 289.

The land is located approximately 1km south west of Pinjarra and is surrounded by essentially rural uses on the fringes of the urban zone. The Shire of Murray Town Planning Scheme No 4 permits a range of uses within this zone, including Chalet Park home, extracted industry, landscapes, garden centres, rural pursuits, intensive agriculture, rural industry, veterinary clinic, stables, kennels, rural produce stalls and catteries. This range of uses are permissible within the rural zone albeit the case that it is acknowledged that an application for development would be required.

The wetlands area over Lot 295 was originally identified in the Wetlands of the Swan Coastal Plain Volume 2B Wetland Mapping Classification and Evaluation Wetland Atlas of Hill, Semeniuk, Semeniuk and Del Marco.

The purpose for which the land is included within a wetland by the Department of Environment is based on the mapping carried out for the Wetlands of the Swan Coastal Plains Mapping. This mapping was a broadbased approach to mapping of wetlands and for that reason the Department of Environment has a specific policy relating to wetlands which provides a protocol by which the wetlands categories are able to be reviewed.

Additionally, errors have been found within the Wetlands of the Swan Coastal Plain evaluation carried out by Hill, Semeniuk, Semeniuk and Del Marco because of the translation of the materials, the collection of evidence by untrained experts and the process by way of GIS for the inclusion of any area considered to be wetland into the geomorphic data set held by the Department of Environment. The Department of Environment holds a data set which could not be relied upon as being clear evidence of what exists on the ground. Pursuant to the protocol attached hereto as **Annexure 1**, the Department of Environment proponent is able to have the Department of Environment review the geomorphic dataset.

The land owners have had two environmental reviews carried out over the land by:

1. Mr Lindsay Stephens, an environmental consultant of Landform Research;
2. Dr Vic Semeniuk, a nationally renowned and recognised wetlands expert and author of the Wetlands of the Swan Coastal Plains Policy.

Both Semeniuk and Stephens agree to the wetland on the western boundary, however Dr Semeniuk identifies further areas of wetlands contained within his report at Figure Two.

There seems to be little doubt that the wetland within the western area could be considered to be regionally significant. Dr Semeniuk considers that

wetland number 1, 2, and 4 in Figure Two of his wetlands report, are regionally significant wetlands.

It is evident in reliance on reports by Lindsay Stephens from Landform Research as well as Dr Semeniuk, that the inclusion of the whole of the Lot 295 Alderson Street within the Region Scheme for the purposes of wetlands, cannot be borne out or supported by the analysis on the ground.

The land owners for that reason seek a review of the inclusion of their land as Regional Open Space for the purposes of wetlands. It should be noted that any area included in a Region Scheme must be done on the basis of purposes for which the scheme can be created. Areas which are not environmentally significant or have no particular regional features ought not to be included within a Regional Town Planning Scheme for the purposes of a reservation. In the event that the Western Australian Planning Commission decides to include those areas within the Region Scheme for the purposes of reservation on the basis of environmental considerations and there is no evidence to support this inclusion, it is open to our clients to seek review from the Supreme Court by way of Writ of Certiorari.

Quite clearly this is not the preferred option. Whereas our clients are prepared to have areas of their land considered to be Regional Open Space, they would wish to do so by way of negotiated planning solutions whereby the balance of the land is zoned for urban development.

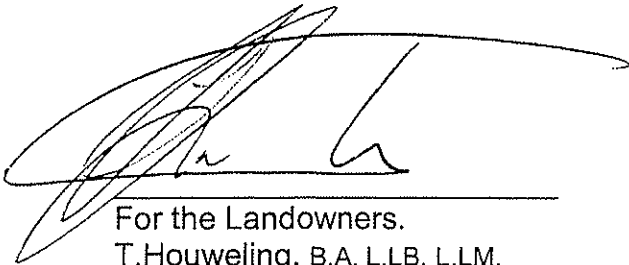
Those areas which are considered to be regionally significant wetlands could be included within the Peel Region Scheme, however those areas outside of regionally significant wetlands ought not to be included within the Peel Region Scheme as areas of land that are reserved.

Additionally it should be noted that this land was sold by the Department of Housing & Works concealing the fact that it was or may have been considered to be environmentally significant land at the time of the sale.

At the hearing we reserve the right to present further evidence as a result of our Freedom of Information request on the Department of Planning & Infrastructure as well as the Shire of Murray. By way of this written submission we simply wish to present to the Committee the position that the land owners do not consider the whole of their land to be regionally significant for the purposes of inclusion in the region scheme. The basis on which the whole of the land is being proposed to be included within the region scheme is not borne out by the evidence. Additionally there has not been any detailed on site assessment of the land beyond that done by Mr Lindsay Stephens of Landform Research and Dr Vic Semeniuk.

Bearing in mind that the geomorphic dataset requires validation and verification which has now taken place, to include the whole of Lot 295 within the region scheme for the purposes of a reservation on the basis of the land being regionally significant from an environmental stand point, would amount to an error of law reviewable by the Supreme Court.

Our clients will be making submissions to the Committee for further consideration in respect of matters. For that reason we would require more time than simply a brief hearing to enable all of the issues to be properly ventilated and considered by the Committee.

A handwritten signature in black ink, appearing to be 'T. Houweling', written over a horizontal line. The signature is stylized with a large loop at the beginning and a long horizontal stroke extending to the right.

For the Landowners.
T.Houweling. B.A. L.L.B. L.L.M.
Barrister & solicitor

Water and Rivers Commission

Position Statement: Wetlands



WATER AND RIVERS
COMMISSION

This position statement has been prepared by the Water and Rivers Commission for Wetlands of the Swan Coastal Plain, and provides the Commission's views on related issues (dated 6/6/01).

Background: Wetlands not only include lakes with open water but areas of seasonally, intermittently or permanently waterlogged soil. Approximately 25% of the Swan Coastal Plain between Moore River and Mandurah is classified as wetland. Though extensive in area, not all wetlands retain significant ecological values due to the concentration of urban and agricultural development in the region. Most wetlands have been either cleared, filled or developed over, leaving only 20% of all the wetlands that were present on the Swan Coastal Plain prior to European settlement. Of these, an estimated 15% of the wetland area has retained high ecological values. These are conservation category wetlands.

The Commission's position is that conservation category wetlands are accorded the highest priority for protection and conservation.

Context: This statement has been prepared to clarify the Commission's position on the management and protection of wetlands of the Swan Coastal Plain and how this relates to development in the region. The following information should be read in the context of ecologically sustainable development consistent with the principles outlined in the State Wetland Conservation Policy (1997) and environmental best management practices.

Wetlands Defined: For consistency with the Wetland Conservation Policy for WA (1997) and the Ramsar Convention (UNESCO 1971), the Commission has adopted the following definition for wetlands: *areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth to which at low tide does not exceed six metres.* However, the provisions of this statement, limited in their extent of reference to the Swan Coastal Plain, only apply to dampland, sumpland, lakes, floodplain and palusplains wetlands. It excludes constructed wetlands.

Wetland Type: A classification system developed by the Semeniuk Research Group was employed for wetland classification on the Swan Coastal Plain (Hill *et al.* 1996). This system classifies wetlands based on landform and water permanence, the various types of which are presented in the table below.

Wetland Type	General Description
Basin Wetlands	Dampland = seasonally waterlogged basin. Sumpland = seasonally inundated basin. Lake = permanently inundated basin. Artificial basins (e.g. dams, reservoirs).
Flat Wetlands	Floodplain = seasonally inundated flat. Palusplain = seasonally waterlogged flat.

Wetland Evaluation and Management: Wetland evaluation is the process of assessing the level of significance of a wetland (see Hill *et al.* 1996). An appropriate management category is assigned to the wetland based on the evaluation, which provides guidance on the nature of the management and protection the wetland should be afforded (see table below).

Management Category	General Description	Management Objectives
C -- Conservation (incorporates EPA Bulletin 686 categories H and C)	Wetlands support a high level of ecological attributes and functions.	Highest priority wetlands. Objective is preservation of wetland attributes and functions through various mechanisms including: <ul style="list-style-type: none"> • reservation in national parks, crown reserves and State owned land, • protection under Environmental Protection Policies, and • wetland covenanting by landowners. These are the most valuable wetlands and the Commission will oppose any activity that may lead to further loss or degradation. No development.
R - Resource enhancement (incorporates EPA Bulletin 686 categories O and R)	Wetlands which may have been partially modified but still support substantial ecological attributes and functions.	Priority wetlands. Ultimate objective is for management, restoration and protection towards improving their conservation value. These wetlands have the potential to be restored to conservation category. This can be achieved by restoring wetland structure, function and biodiversity. Protection is recommended through a number of mechanisms.
M - Multiple use (aligned with EPA Bulletin 686 category M)	Wetlands with few important ecological attributes and functions remaining.	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through landcare. Should be considered in strategic planning (e.g. drainage, town/land use planning).

Wetland Database Custodianship: The Commission is the primary custodian of the State's wetland mapping database which includes extensive and detailed mapping of wetlands on the Swan Coastal Plain. The Commission's wetland database is recognised as the most accurate and up to date reference for wetland mapping on the Swan Coastal Plain. The wetland mapping on the Commission's database, which incorporates wetland evaluation (management) categories, should be consulted for all wetland queries.

Wetland Re-evaluation: The Commission acknowledges that the database, while the most accurate store of wetland spatial information available, cannot be 100% accurate because of the inherent difficulties involved in monitoring all wetlands for changes over time. Therefore, the Commission allows wetlands to be reassessed if an evaluation category is in genuine dispute. A Commission endorsed assessment protocol is available and must be followed by proponents reassessing wetland management categories.

Wetland Management Requirements: There is a presumption against approving any activity likely to impact on priority management wetlands, including developments that are likely to require, cause, or result in the following: filling, clearing, mining, drainage into or out of, effluent discharge into, pollution of, and degradation to the wetland. Adequate buffers should be applied according to the principles outlined below. The Commission's position on conservation category wetlands is no development.

Wetland Buffers and Land Use

Buffers are designed to protect wetlands from potential deleterious impacts while helping safeguard and maintain ecological processes and functions within the wetland and, wherever possible, in the buffer. Buffers also act to protect the community from potential impacts such as nuisance midge problems. Buffer distances are measured from the outside extent of wetland dependant vegetation to the outside edge of any proposed development or activity. The required buffer distances for wetlands depend on the land use, 50 metres being the minimum buffer distance applied. For a guide to the Commission's wetland buffer requirements for a range of land uses on the Swan Coastal Plain (Davies and Lane 19) refer to the table presented below.

Purpose of Buffer	Land Use Example	Recommended Buffer Width*
Reduction of impact of nuisance insects on residents (e.g. midges).	Residential housing.	800-1,000 m depending on orientation of wetland.
Protection from nutrient inputs.	Market garden.	200 m on transmissive soils, 100 m on non-transmissive soils.
Protection from pollution (e.g. petroleum hydrocarbons, surfactants)	Mechanical workshop.	200 m.
Protection from heavy metal contamination.	Mineral processing operation.	200 m.
Protection from pesticide drift.	Orchard.	200 m.
Reduction of sedimentation	Timber harvesting operation.	100 m.
Protection of groundwater quality.	Agricultural composting facility.	2,000 m in direction of groundwater flow for transmissive soils
Protection of avifauna nesting and roosting sites.	Residential housing.	200-800 m.
Protection from weed infestation.	Residential housing.	50-100 m.
Maintenance of natural water levels.	Vineyard.	200 m but dependant on water extraction.

*Buffer width recommendations may be varied at the discretion of the Commission as new data becomes available. Guidance on the Commission's buffer recommendations is received from the State Wetland Coordinating Committee sub-committee on wetland buffers.

Land Use Compatibility

As a general rule, wetland management categories are regarded as equivalent to the States public drinking water source protection areas. Therefore, the wetland management categories of conservation, resource enhancement and multiple use correspond to water source protection areas Priority 1 (P1), Priority 2 (P2) and Priority 3 (P3) respectively, in terms of land use compatibility (Water and Rivers Commission 2001).

Existing and Proposed Activities

The Commission recognises that many activities were established prior to the introduction of this statement. However, this is not considered justification for establishing new or expanding existing land use activities that are incompatible with the wetland management objectives. Proposed activities are required to be compatible with the management requirements of any wetlands that the land use may impact.

For more information contact the Wetlands group, Catchment and Waterways Branch, Policy and Planning Division.

References

- Davies, P. M. and Lane, J. A. K. (1975) *Guidelines for design of effective buffers for the Swan Coastal Plain*. Report to: Australian Nature Conservation Agency, Canberra.
- Government of Western Australia (1997) *Wetland Conservation Policy for Western Australia*. State Government Publisher, Perth.
- Hill, A. L., Semeniuk, C. A., Semeniuk, V. and Del Marco, A. (1996) *Wetlands of the Swan Coastal Plain*. Volume 2A. Water and Rivers Commission, Perth.
- UNESCO (1971) Article 1, part 1, *Convention on wetlands of international significance*. Published in Australia in 1976 for the Department of Foreign Affairs. Australian Government Publishing Service, Treaty Series 1975, No. 48.
- Water and Rivers Commission (2001) *Land use compatibility within Public Drinking Water Source Areas*. Water and Rivers Commission, Perth.

V & C Semeniuk Research Group

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7th December 2005

Mr T Houwelling
Cornerstone Legal
1/300 Vahland Ave.,
Willeton, W.A., 6230

Letter report on the wetlands, Lot 295 Alderson Street, Pinjarra

Dear Tim

Thank you for inviting the V & C Semeniuk Research Group (VCSRG) to carry out an assessment of wetlands in the area Lot 295 Alderson Street, Pinjarra (Deposited Plan 180633, Certificate of Title 1400 Folio 289). To carry out the instructions in your letter, I have undertaken out a field survey (on site analysis) of the Lot, and also conducted a desk study to determine whether or not the whole of the site would be considered a wetland, or whether only a portion could be considered a wetland.

In this study, for the field survey, I visited Lot 295 and described and assessed the land under question, described and assessed the vegetation and soils therein, determined where the water table was located relative to the surface, collected soils for laboratory studies, and collected moist soil samples for determining moisture content. In the laboratory, and at the office, I processed the soil samples to determine moisture content by oven drying, and examined under a microscope and photographed the soils that were collected to determine their biogenic wetland features. The desk study involved examining the documentation in relation to Lot 295, reviewing the Water & Rivers Commission Atlas on wetlands for the region, and reviewing our own VCSRG in-house R&D data.

This letter report is structured as follows:

- 1.0 Background information
- 2.0 Description of the regional landscape
- 3.0 Description of Lot 295 landscape
- 4.0 Wetlands in Lot 295
- 5.0 Soil and water details of the wetlands in Lot 295
- 6.0 Assessment of Lot 295
- 7.0 Discussion and Conclusions
- 8.0 References

Note that this was not a comprehensive botanical study, and hence the flora noted here is not an exhaustive list. Rather, it is intended to show the diagnostic species that inhabit the wetland. Further, in the time available for fieldwork, priority was set on mapping the wetlands, and not on finding Priority species or Rare and Endangered plant species.

1.0 Background information

The Western Australia Planning Commission is intending to carry out minor amendments to the Peel Region Scheme by including Lots 295, 350 and 354 Alderton Street, amongst other lots, into the Regional Open Space reservation system. In detail Lot 295 will be transferred from Rural Zoning to Regional Open Space Reservation.

In the Inner Peel Region Structure Plan, 1997, the subject land is classified as Natural Resource Protection - Subject to further study, a classification that applies to areas of bushland in good condition that require further studies to determine appropriate mechanisms for their protection. Further examination of the subject land had taken place, which included a detailed wetland and vegetation assessment of Lot 295 and a review of the conservation values of the overall area by the Department of Planning and Infrastructure in consultation with the Department of Conservation and Land Management and Department of Environment. In this context, because of the quality and range of the vegetation in both upland and wetland areas, and the presence of rare significant and rare flora, the terrain was assessed as having local and regionally significant remnant vegetation.

In this context, it appears that the natural history attributes that have been important in assessing Lot 295 as significant are:

1. remnant upland and wetland within a region that is largely cleared
2. quality and range of upland and wetland vegetation in Lot 295
3. presence of a conservation category wetland within Lot 295
4. presence of significant and rare flora

The wetland maps presented in Volume 2B of the Water & Rivers Commission Atlas do not cover this area of Lot 295.

2.0 Description of the regional landscape

The region of Lot 295 is located in the geomorphic setting of the Pinjarra Plain of McArthur & Bettenay (1960) and in the Keybrook Suite of wetlands of C A Semeniuk (1988). This region is composed of a nearly flat to low undulating land surface underlain by sand, muddy sand, locally mud, and ironstone. The water table, where there are no drains, is often close to the ground surface, and as a result there are numerous wetlands. Using terminology of C A Semeniuk (1987), these are palusplains (seasonally waterlogged or moist plains), damplands (seasonally waterlogged or moist basins), and sumplands (seasonally inundated basins).

Throughout the region, there has been extensive clearing for agriculture, and as such, the local area of Lot 295 and its adjoining terrain supports an isolated patch of remnant vegetation (Figure 1).



Figure 1: Lot 295, with remnant native vegetation (circled) in the Pinjarra region

3.0 Description of Lot 295 landscape

Lot 295 is a trapezoid block of land, some 300 m x 300 m in size. The natural terrain of Lot 295 comprises low undulating landscape, consisting of low sand hills and wetlands. Overall, relative relief is low. The terrain mostly consists of dryland (the low sand hills), vegetated by *Allocasuarina fraseriana* (the sheoak formerly known as *Casuarina*, *Eucalyptus marginata* (the jarrah), *Corymbia calophylla* (the marri), *Banksia attenuata*, *Banksia ilicifolia*, *Jacksonia furcellata*, *Macrozamia riedlei* (the zamia palm), *Xanthorrhoea preissii* (the grass tree).

Numerous tracks traverse Lot 295, and along its northern and northeastern margin there is a straight to curving drain (inhabited by *Typha orientalis* and *Carex*). Locally, in patches some 50 m x 20 m in size, the terrain has been cleared and invaded by weeds.

4.0 Wetlands in Lot 295

There are four wetlands on Lot 295 (Figure 2), that are either complete wetlands, or parts of wetlands that, while occurring on Lot 295, are actually mainly located outside the Lot. These are notated as Wetland # 1, Wetland # 2, Wetland # 3, and Wetland # 4 (Figure 2). All the wetlands are basins, and relative to the water table, they are classified as damplands (seasonally waterlogged) or sumplands (seasonally inundated), following the terminology of C A Semeniuk (1987).

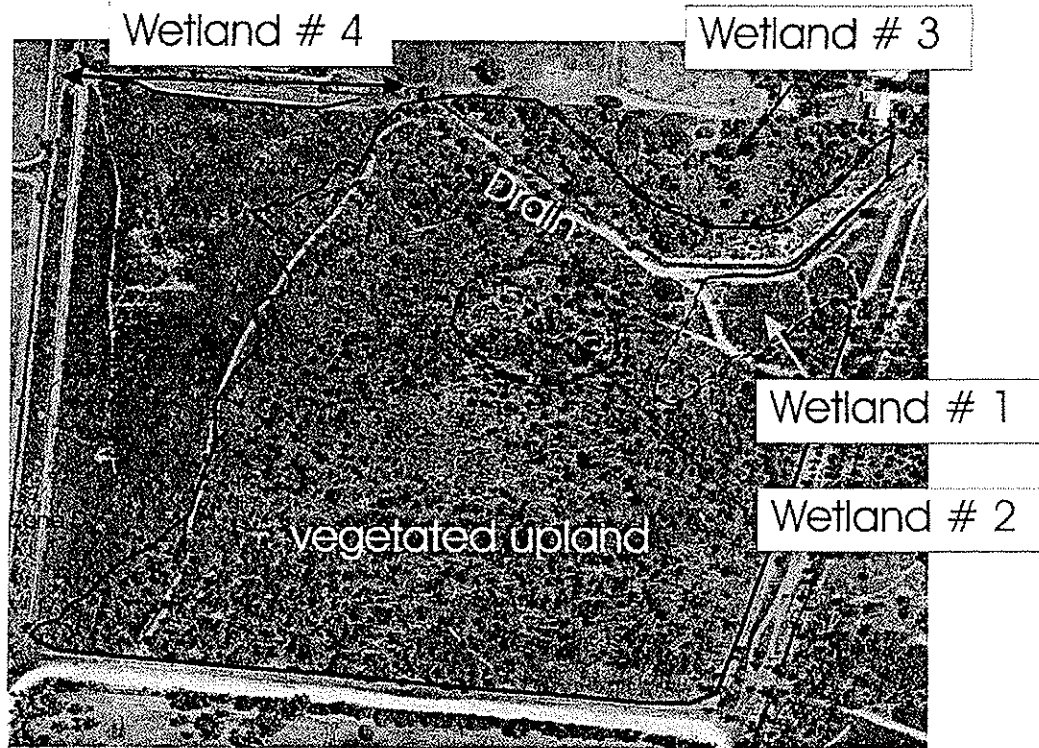


Figure 2: Annotated aerial photograph of Lot 295 showing location of the four wetlands, the vegetation zones in Wetland # 4, the extent of the upland vegetation, and the nature of the terrain traversed by a drain to the north and tracks throughout

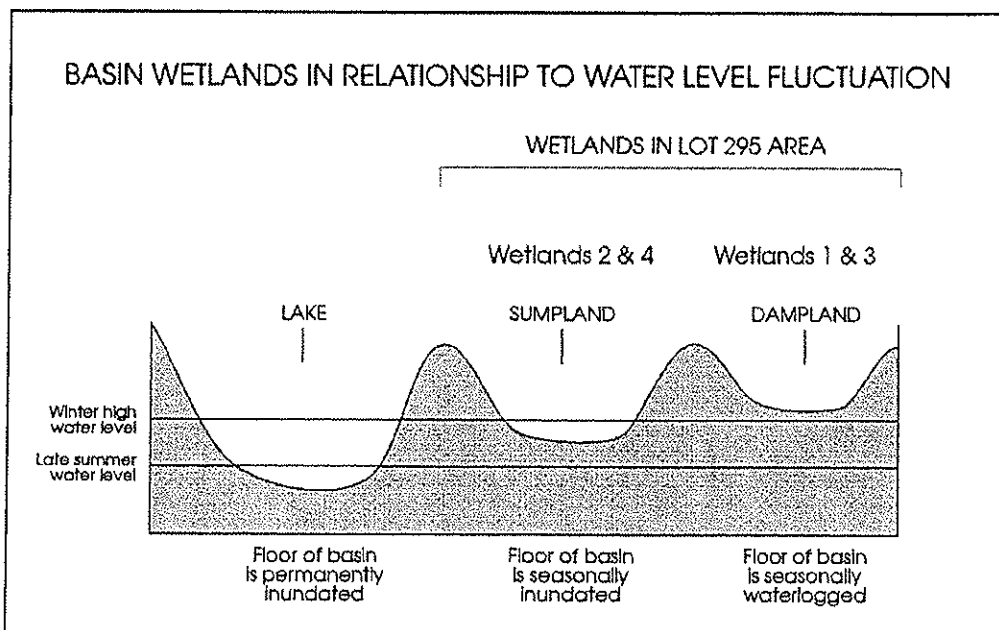


Figure 3: Wetland classification - nomenclature of basins with respect to their hydrological regime in relation to a fluctuating water table (after C A Semeniuk 1987)

Wetland # 1 is a medium sized elongate vegetated dampland, c. 200 m long and 50 m wide, trending northeast, in the northeast of Lot 295. It extends into the adjoining Lot; hence only part of the total wetland is on Lot 295. The wetland is underlain by humic quartz sand. The vegetation inhabiting the wetland consists of low open heath and sedgeland of *Pericalymma ellipticum*, *Dasypogon bromellifolia*, *Hakea varia*, with *Stylidium* sp, *Gompholobium*, *Stirlingia latifolia*, with some scattered *Jacksonia furcellata*. *Pericalymma ellipticum* in this assemblage is the key species that indicates wetland conditions.

Wetland # 2 is a small circular forested sumpland, c.100 m diameter, in the central northern part of Lot 295. The wetland is underlain by humic quartz sand and peaty sand. The wetland consists of closed forest of *Melaleuca pressiana*, *Kunzea ericifolia*, *Corymbia calophylla*, with a low open heath and sedgeland understory consisting of floristic elements similar to Wetland # 1. *Melaleuca pressiana* is indicative of wetland conditions.

Wetland # 3 is a medium sized forested dampland, c.200 m in (sectorial) size, along the northern boundary Lot 295; only the southern sectorial margin of the wetland occurs in Lot 295. This wetland margin is underlain by humic quartz sand. *Melaleuca pressiana* is indicative of wetland conditions. This wetland margin is inhabited by an open forest to woodland of *Melaleuca pressiana*, with understory of *Allocasuarina fraseriana*, *Xanthorrhoea preissii*, *Hypocalymma angustifolia* and *Dasypogon bromellifolia*. *Melaleuca pressiana* in this assemblage is the key species that indicates wetland conditions.

Wetland # 4 is a large vegetated sumpland, c.300 m long along the western part of Lot 295. The wetland is only partly present on Lot 295, and the remainder is cleared and on adjoining Lots to the northeast and west of Lot 295. The wetland is underlain by humic sand in its drier parts along the eastern margin, and by muddy and peaty sand in its wetter parts. Vegetatively, it is more complex than the other three, and is zoned, with a peripheral transitional zone (Zone A) on its eastern margin, a low heath to sedgeland (Zone B) on the inside of Zone A, a heath (Zone C) in one of its the wettest parts, and a heath/woodland (Zone D) in its other wettest part. Zone A is similar in vegetation to Wetland # 1 (viz., low heath/sedgeland of *Pericalymma ellipticum*, *Dasypogon bromellifolia*, *Hakea varia*) but additionally with *Anarthria* sp, *Leptospermum longitudinale*, and other sedges, and scattered trees of *Melaleuca pressiana* and *Corymbia calophylla*. Zone B is low heath of *Pericalymma ellipticum* with emergent *Viminaria juncea* and *Melaleuca pressiana*. Zone C is *Melaleuca viminea* closed heath 0.5-1.0 m high. Zone D is medium heath of *Melaleuca incana*, *Astartea facicularis*, *Leptocarpus* spp and other sedges, and overstorey of *Melaleuca pressiana*. The species *Pericalymma ellipticum*, *Melaleuca pressiana*, *Melaleuca viminea*, *Viminaria juncea*, *Melaleuca incana*, *Astartea facicularis*, *Leptocarpus* spp, *Anarthria* sp, and *Leptospermum longitudinale* in this assemblage are the key species that indicate wetland conditions.

5.0 Soil and water details of the wetlands in Lot 295

Water table level, water moisture content, and wetland soil features were examined in wetlands 1, 2 and 4. Soil moisture in mid November 2005, and surface moisture content in the mid margin and southern part of Wetland # 4 in late November 2005 are presented in Table 1 below. Other relevant information on the wetlands is presented in Table 2 below. Figure 4A shows sponge spicules. Sponge spicules are particularly important as wetland indicators in that sponges require inundation, showing that the soil in which they are now occur has been inundated at some time recently (either seasonally, each year, or in the past 10-20 years in response to medium term climatic fluctuations. Figure 4B shows the phytoliths (silica inclusions in plant tissue that remains as residues after the decay of the plants) derived from wetland sedge plants; that in this case, are those occurring in the soil of Wetland # 1. The phytoliths indicate that there has been seasonal waterlogging, or at least waterlogging sometime in the recent past (say, 10-20 years ago, in response to medium term climatic fluctuations).

Table 1: Soil moisture (%) in the wetlands in Lot 295

Site and sample depth	% moisture	soil type	depth to water table
Wetland # 1: 0-10 cm	9.4	humic sand	
Wetland # 1: 20 cm	11.4	sand	
Wetland # 1: 30 cm	15.1	sand	
Wetland # 1: 40 cm (at water table)	20.2	sand	40 cm
Wetland # 2: 0-10 cm	37.9	peaty sand	
Wetland # 2: 20 cm	10.6	sand	
Wetland # 2: 30 cm	18.9	sand	
Wetland # 2: 40 cm (at water table)	22.7	sand	40 cm
Wetland # 4 (east margin): 0-10 cm	10.2	humic sand	
Wetland # 4 (east margin): 30 cm	7.1	sand	40 cm
Wetland # 4 (south): 0-10 cm	29.0	muddy sand	30 cm

Table 2: Information on the wetlands 1, 2 and 4 in Lot 295

Wetland	depth WT Nov 2005	phytoliths	sponges	implications
1	40 cm	sedges	no	water table depth in November indicates that the wetland would have been moist with high water table levels in winter; phytoliths show prevalent wetland plants
2	40 cm	sedges	yes	water table depth in November indicates that the wetland would have been moist with high water table levels in winter; sedge phytoliths indicate wetland plants are prevalent; sponge spicules indicate the wetland has been periodically inundated
4	30 cm	sedges	yes	water table depth in November indicates that the wetland would have moist soil with high water table levels in winter; phytoliths indicate wetland plants are prevalent; sponge spicules indicate that the wetland has been periodically inundated

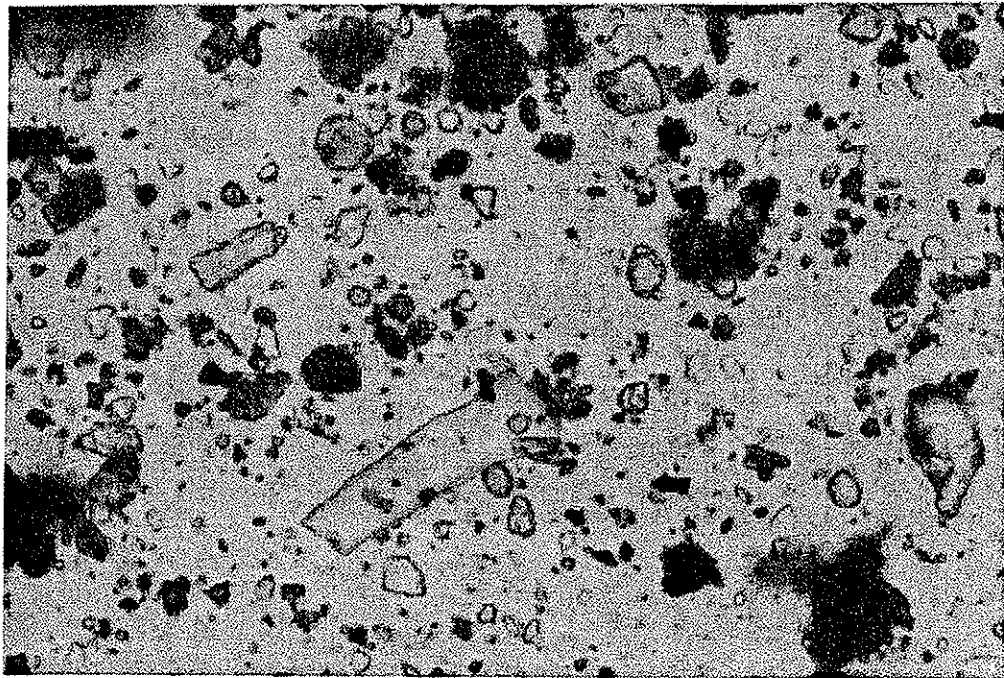
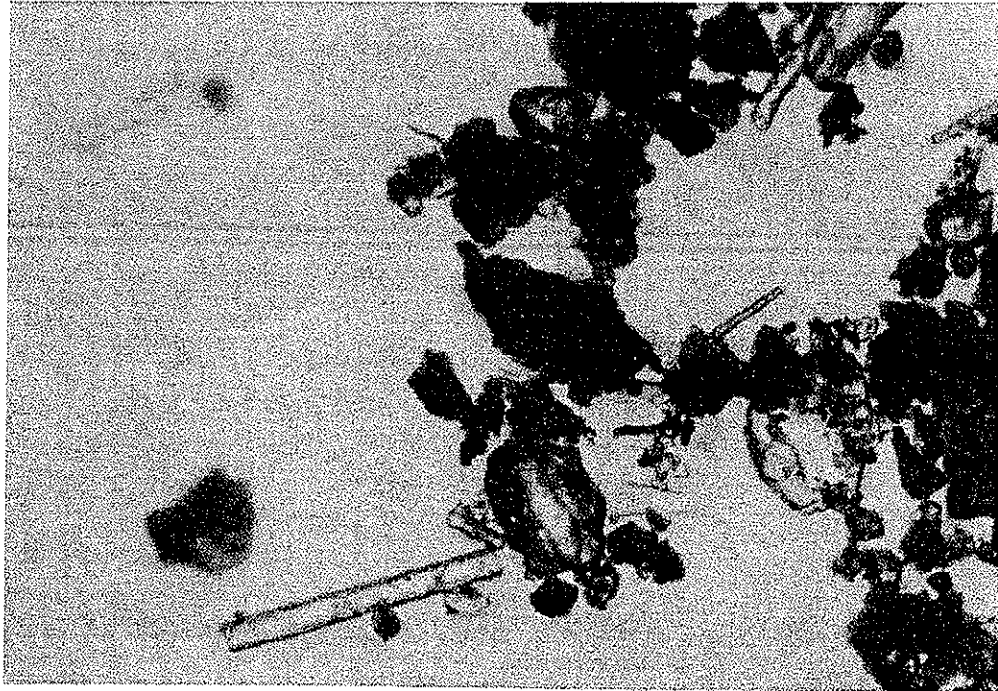


Figure 4: A (upper photograph) is soil under the microscope, from Wetland # 2, showing dark grains (organic matter), round/ovoid glassy grains (quartz sand), and glass-like rod (sponge spicule). B (lower photograph) is soil from Wetland # 1, showing abundance of phytoliths (speckling of grains throughout the view).

7.0 Assessment of Lot 295

Lot 295 has a drain and numerous tracks traversing it. In addition, there are patches within the Lot that are invaded by weeds. However, for the larger part of its area, Lot 295 has remnant upland and wetland vegetation in relatively good condition.

8.0 Discussion and Conclusions

The main conclusions deriving from this survey are as follows:

1. on criteria of vegetation, depth to water table in November, soil moisture and soil particles, four wetlands are recognised as occurring on Lot 295;
2. these wetlands cover c. 45% of the area of Lot 295;
3. wetlands # 1, # 2 and # 4 have wetland vegetation in relatively good condition;
4. each wetland in Lot 295 is different in terms of its vegetation/floristic composition;
5. the upland vegetation is mainly jarrah, marri, sheoak assemblage;
6. the upland vegetation is variable in condition, but largely in relatively good condition.

In the context of your letter, with a request as to identifying which portions of the land are significant, I proffer the following. Wetlands # 1, # 2 and # 4 are regionally significant, as they are remnants of these types of wetlands in a region that is now largely cleared. Protection of these wetlands would require a buffer zone, which depending on details of intended land-use would range in width from 50 m to 200 m. Portions of upland terrain that have been partly cleared and that are partly invaded with weeds are not regionally significant. The wetland to the north, viz., Wetland # 3 also is not regionally significant.

9.0 References

McArthur W M & Bettenay E 1960 The development and distribution of soils of the Swan Coastal Plain, Western Australia. CSIRO Soil Publication No 16.

Semeniuk C A 1987. Wetlands of the Darling System - A geomorphic approach to habitat classification. Journal of the Royal Society of Western Australia 69: 95-111.

Semeniuk C A 1988. Consanguineous wetlands and their distribution in the Darling System, southwestern Australia. Journal Royal Society Western Australia 70: 95-111.

I trust that this letter report is to your satisfaction.

Yours sincerely,

Dr V Semeniuk
Director, VCSRG

Wetland Assessment, Lot 295, Alderson Street Pinjarra

Introduction

25 February 2004

This wetland and vegetation assessment of Lot 295, Alderson Street, Pinjarra was undertaken to assess the potential of the site for a subdivision.

A Subdivision Guide Plan, prepared by Dykstra and Associates, shows the site to be subdivided into 2.0 hectare lots. The subdivision was planned to be able to accept an overlay plan at the local authority request.

The site was previously owned by the Crown and sold to the current owners approximately 2 years ago.

A wetland has been nominated on the site and this report was to determine the significance of the wetland and suggest how the wetland may be able to be fitted into the Subdivision Guide Plan.

Studies of the vegetation were made on 15 July 2003, 20 November 2003 and 6 December 2003 by Lindsay Stephens to assess the vegetation and delineate the wetland, and search for Rare and Priority flora. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003 flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

The lot lies to the west of Pinjarra townsite in an area of proposed urban expansion.

Geomorphology and Hydrology

Lot 295 lies on the eastern side of the Pinjarra Plain. The site is flat with an elevation varying by only a few metres, dropping from east to west.

The soils on site are exposed in a central drain, and are sands in the eastern two thirds, overlying clays of the Guildford Formation. In the western third the Guildford Formation is exposed and this reduces vertical permeability of the soils.

The site is well drained in the eastern and central sandy areas, but has reduced drainage in the west. A drain runs along the northern boundary, diverging into the central north east of the site.

The wetter western area is subjected to shallow ground water in winter with water collecting due to restricted lateral and vertical drainage. At the time of the site inspection surface water had begun to lay on the surface. Following winter, water will evaporate, be transpired, and perhaps slowly infiltrate to the subsoils.

Vegetation

Introduction

Studies of the vegetation were made by Lindsay Stephens.

Lot 295 was extensively walked and the plant species identified. The vegetation studies were completed in winter (15 July 2003) and spring (20 November 2003 and 6 December 2003), with the spring study on 20 November 2003 conducted at a time when the wetland species appeared to be at their peak.

Prior to the spring surveys the CALM and WA Herbarium databases were searched and published references checked to assist field observations. Specimens that showed similarities to those on the CALM and Herbarium databases, and specimens not readily identified, were checked against the WA Herbarium reference collection.

The vegetation is partially disturbed across the site, with the edges subject to exotic and weed species incursions. In other parts the vegetation is in Good to Excellent Condition.

Communities

Five vegetation communities are identifiable. These are not quite typical communities of the Swan Coastal Plain because of their small size and transitional nature.

The vegetation communities are;

- *Banksia* Woodland in the centre and east. This contains scattered patches of *Melaleuca* Woodland.
- *Kunzea ericifolia* Thicket in a small area on the eastern boundary, probably originating from disturbance.
- *Melaleuca* Woodland in scattered patches across the site, and the south western corner.
- *Pericalymma elipticum*, *Hypocalymma angustifolium* Heathland as a transition between the wetter Myrtaceae Shrubland and the *Banksia* Woodland
- Myrtaceae Shrubland along the western boundary in the wetter areas.

Banksia Woodland

This varies across the site with the larger and understorey species changing in their frequency and presence.

The overstorey is dominated by *Banksia attenuata*, *Banksia ilicifolia*, *Allocasuarina fraseriana* *Eucalyptus calophylla* and occasional *Melaleuca preissiana*. Under this are taller shrubs of occasional *Kunzea ericifolia*, *Adenanthos cygnorum*, *Melaleuca thymoides*, *Jacksonia furcellata*, *Philotheca spicata*, and occasional *Hakea lissocarpha*.

The understorey contains common species such as *Xanthorrhoea preissii*, *Gompholobium tomentosum*, *Melaleuca incana*, *Bossiaea eriocarpa*, *Phlebocarya ciliata*, *Jacksonia sericea*, *Nuytsa floribunda*, *Daviesia decurrens*, *Verticordia sp*, *Petrophile linearis*, *Stirlingia latifolia* and *Acacia pulchella*.

Ground covers include *Patersonia occidentalis*, *Burchardia spp*, *Acacia pulchella*, *Damperia linearis*, *Dasypogon bromeliifolius*, and *Conostylis caricina*, *Conostylis aculeata*, *Opercularia hispidula*, *Phyllanthus calycinus*, *Lepidosperma angustatum*, *Drosera erythrorhiza*, *Stylidium brunonianum*, *Phlebocarya ciliata*, *Brachyscome pusilla*, *Pterostylis vittata*, *Drosera pallida*, *Patersonia occidenatalis*, *Hardenbergia comptoniana*, *Lagenophora huegelii*, *Caladenia sp*, *Acacia pulchella*, *Acacia sessilis*, *Xanthorrhoea gracilis*, *Hibbertia huegelii*, *Lyginia barbata*, and *Desmocladius fascicularis*.

This community is most like Community Type 21a and is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994, *A Floristic survey of the southern Swan Coastal Plain*, Unpublished Report for the Australian Heritage Commission, prepared by Department of Conservation and Land Management and Conservation Council of Western Australia Incl).

***Kunzea ericifolia* Thicket**

This is dominated by a thicket of *Kunzea ericifolia*, with reduced understorey and some groundcovers. Ground covers in this vegetation are dominated by species from the Banksia Woodland and the lower communities, such as *Phlebocarya ciliata*. Annual species are often present, but in July it was a little early to search for these. The understorey and ground cover of this community is dominated by lower elevation Banksia Woodland and therefore this community is not classified as a wetland.

This community is most like Community Type 21c (Gibson et al, 1994) being lower in the landscape and thus located on moister soils of Bassendean Sands.

***Melaleuca* Woodland**

This consists of gradational species between Banksia Woodland. The dominating vegetation is scattered *Melaleuca preissiana* over shrub and groundcover vegetation of lower elevation Banksia Woodland.

This community is also best listed as a type of Community Type 21c (Gibson et al) being located in small depressions of the sand ridge and thus located on moister soils of Bassendean Sands. *Melaleuca preissiana* is common in Community Type 21c, but on the basis of the ground and understorey species it is not classified as wetland.

***Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland**

Pericalymma elipticum, *Hypocalymma angustifolium* Heathland occurs as a transition between the wetter Myrtaceous Shrubland on the western boundary and *Banksia* and *Melaleuca* Woodland. Both *Pericalymma elipticum* and *Hypocalymma angustifolium* form a dominant feature of the community which also contains species such as *Jacksonia lehmannii?*, *Acacia pulchella*, *Xanthorrhoea preissii*, *Dasypogon bromeliifolius*, *Burchardia umbellata*, *Hakea varia*, *Hypolaena exsulca*, *Jacksonia sericea*, *Melaleuca incana*, *Acanthocarpus canaliculatus*, *Ottelia ovalifolia*.

This community has elements of Community Types 8, 9 and 10a, Gibson et al, 1994. Gibson et al 1994 list all three Community Types as Well Reserved, Vulnerable.

Myrtaceous Shrubland along the western boundary in the wetter areas.

The Myrtaceous Shrubland occurs along the western boundary where surface waterlogging occurs in winter. Species similar to those in the *Pericalymma ellipticum*, *Hypocalymma angustifolium* Heathland, but species more suited to slightly wetter conditions enter the community and others drop out. Some additional species are *Melaleuca viminea*, *Melaleuca lateritia*, *Astartea fascicularis* and *Lepidosperma longitudinale*.

This community forms a transitional community between *Pericalymma ellipticum*, *Hypocalymma angustifolium* Heathland and the Banksia Woodland. It is probably best listed as a type of Community Type 21c (Gibson et al) being located on the lower western edge of the sand ridge and thus located on moister soils of Bassendean Sands.

There was evidence of bandicoots in this vegetation community.

Community Significance

The site was assessed by Keighery B, and M Trudgen, 1992, Remnant Vegetation on the Alluvial Soils of the Eastern Side of the Swan Coastal Plain, Department of Conservation and Land Management.

The site was listed as the "Cole Street", Site 39, Pinjarra. Keighery and Trudgen recommended that the site, which included the land to the east, be regarded as a possible conservation area. They also listed the site as being in private ownership.

Department of Conservation and Land Management, 1980, Atlas of Natural Resources , Darling System, Western Australia, list the site as Vegetation Complex 32 Guildford Complex.

EPA Guidance for the Assessment of Environmental Factors, No 10, Levels of assessment for proposal affecting natural areas within the System 6 region and Swan Coastal Plan portion of the System 1 Region (January 2003) lists the Guildford Complex as having only 5% remaining of which 143 hectares is in secure tenure, which represents 0.2% of the pre 1750 extent of vegetation.

Community Type 21a is listed by Gibson et al as Well Reserved with a Conservation Status of Low Risk. (Gov of WA, 2000, Bush Forever Volume 2, and Gibson et al, 1994.

Whilst Bush Forever considered only the Perth Metropolitan area, Gibson et al considered the vegetation communities of the Swan Coastal Plain. Community Type 21a extends from Gingin to nearly Busselton, with particular concentration south of Perth (Gibson et al, 1994). The assessment of Community Type 21a as "Well Reserved, Low Risk" is therefore an assessment of the condition of the Community across its whole distribution.

Gibson et al 1994 lists Community Types 8, 9 and 10a as Well Reserved, Vulnerable. These communities occur in scattered locations from just north of Perth to Busselton.

The location of the various plant communities is shown on the aerial photograph Figure 1.

Rare Flora

The CALM and WA Herbarium databases were searched prior to the site inspections in November and December. The species were checked in published references and any similar species collected and checked against the reference collection in the Western Australian Herbarium.

During the site inspection of 20 November 2003 the site was walked along east west transects of 50 metres. The wetland and wetland buffer areas in the west were walked at intervals of 10 - 20 metres to search for Rare or Priority species. Any species not readily identified in the field was collected and then either identified using published texts or cross checked against the Western Australia Herbarium reference collection.

No Declared Rare taxa were identified. However two Priority Taxa were recorded, although it is uncertain whether the taxa recorded as *Jacksonia sericea* is that species.

Jacksonia sericea? occurs on site in the west. The pedicel of the pods was not recurved in the specimens observed and so the taxa may not be *Jacksonia sericea*. *Jacksonia sericea*, a Priority 3 plant, is relatively common in scattered communities, particularly to the north of Perth and extends to Pinjarra. It is not under immediate threat.

Craspaedia argillicola, a Priority 2 species, was observed in the wetter areas of the west, in the area nominated as Myrtaceous shrubland and *Pericalymma - Hypocalymma* Heath. It occurs from Pinjarra to Waterloo.

The western wetland vegetation, Myrtaceous shrubland, is likely to contain other less common species. It is a vegetation type that has predominantly been locally cleared on nearby properties for summer grazing and is recommended for preservation. The *Pericalymma - Hypocalymma* Heath and the south western area of Melaleuca Woodland (MWA on Figure 1) also forms part of that buffer.

Vegetation Condition

The Vegetation Condition Scale, modified from Bush Forever, was used, as shown below.

This Assessment		Bush Forever, 2000 (See Bush Forever, 2000, Volume 2, Table 2, page 48).		Keighery/Connell and Trudgen, (See Bush Forever, 2000, Volume 2, Table 12, page 48).	
1	Excellent	1	Pristine	1	Excellent
2	Very Good	2	Excellent	2	Very Good
3	Good	3	Very Good	3	Good
4	Fair	4	Good	4	Poor
5	Degraded	5	Degraded	5	Very Poor
6	Completely Degraded	6	Completely Degraded	6	Completely Degraded

Approximately half the site is in Excellent to Very Good Condition, including the wetland vegetation along the western edge.

Some degradation occurs around the edges, particularly along the drain in the north eastern corner. Disturbance also occurs through the centre of the site. In general the edge effects are classified as Fair, and this includes a minor area of clearing in the south western corner. Some Degraded vegetation is present in the north eastern corner.

The central part shows evidence of disturbance, with vegetation disturbance caused by minor firewood gathering, partial clearing through activity, and probably some dieback, based on the death of Banksias. This vegetation is rated as being in Fair Condition.

Vegetation Condition is shown on Figure 2.

Species list

The species list below shows the species identified on site during the inspections of 15 July 2003, 20 November 2003 and 6 December 2003 and has been divided into the species found in the wetter areas and those on the sand ridge; Studies by Lindsay Stephens. The main studies were conducted on 15 July 2003 and 20 November 2003. On 20 November 2003 flowering of the wetland species was near maximum because of the later effects of these species which often flower later in spring and into summer.

A total of 111 taxa were identified. These are listed in two columns where they commonly occur.

- Sandridge - Higher and Lower Elevations

The species contained in the *Banksia* Woodland in the centre and east have been combined with the *Kunzea ericifolia* Thicket on the eastern boundary. These communities were searched for Rare and Priority species but individual species were not searched to the same extent as the wetland. That is the species list for the sand ridge is not complete.

Small areas of *Melaleuca* Woodland occur as scattered patches across the sandridge and in the south western corner. It contains elements of both the wetland vegetation and the sand ridge vegetation, but is dominated by the sand ridge vegetation.

- Wetland and Wetland Buffer

Pericalymma ellipticum, *Hypocalymma angustifolium* Heathland is a transition between the wetter Myrtaceae Shrubland and the *Banksia* Woodland. It is included with Myrtaceae Shrubland of the wetter areas.

The small area of *Melaleuca* Woodland in the south west (Mwa) is included in this category because the understorey contains greater wetland species.

Family	Species	Predominantly found on ;	
		Wetland and Wetland Buffer	Sandridge - Higher and Lower Elevations
Amaranthaceae	<i>Ptilotus drummondii</i>	X	X
Anthericeae	<i>Tricoryne elatior</i>	X	X
	<i>Thysanotus patersonii</i>	X	X
Asteraceae	<i>Brachyscome pusilla</i>		X
	<i>Craspaedia argillicola</i>	X	
	<i>Lagenophora huegellii</i>		X
	<i>Myriocephalus appendiculatus</i>	X	
	<i>Podolepis gracilis</i>	X	
	<i>Vellereophyton dealbatum*</i>	X	
Casuarinaceae	<i>Allocasuarina fraseriana</i>		X
	<i>Allocasuarina humilis</i>		X
Colchicaceae	<i>Burchardia umbellata</i>	X	X
Cyperaceae	<i>Cyathochaeta avenacea</i>	X	
	<i>Ficinia nodosa</i>	X	
	<i>Isolepis</i> sp	X	
	<i>Lepidosperma longitudinale</i>	X	
	<i>Lepidosperma squamatum</i>	X	X
	<i>Mesommelaena tetragona</i>	X	X
Dasyopogonaceae	<i>Acanthocarpus canaliculatus</i>	X	
	<i>Dasyopogon bromeliifolius</i>	X	X
	<i>Lomandra preissii</i>	X	
Dilleniaceae	<i>Hibbertia hypericoides</i>		X
	<i>Hibbertia huegellii</i>	X	X

	<i>Hibbertia racemosa</i>		X
Droseraceae	<i>Drosera erythrorhiza</i>		X
	<i>Drosera gigantea</i>	X	
	<i>Drosera pallida</i>		X
Epacridaceae	<i>Leucopogon</i> sp		X
Euphorbiaceae	<i>Phyllanthus calycinus</i>		X
Goodeniaceae	<i>Damperia linearis</i>		X
	<i>Lechenaultia expansa</i>	X	
	<i>Lechenaultia floribunda</i>	X	
Haemodoraceae	<i>Anigozanthos manglesii</i>		X
	<i>Anigozanthos viridus</i>	X	
	<i>Conostylis aculeata</i> subsp <i>aculeata</i>		X
	<i>Conostylis caricinia</i>		X
	<i>Haemodorum simplex</i>	X	
	<i>Haemodorum spicatum</i>		X
	<i>Phlebocarya ciliata</i>	X	X
Hydrochritaceae	<i>Ottelia ovalifolia</i>	X	
Iridaceae	<i>Patersonia juncea</i>	X	
	<i>Patersonia occidentalis</i>		X
Lamiaceae	<i>Hemiandra pungens</i>	X	
Lobeliaceae	<i>Lobelia alata</i>	X	X
	<i>Lobelia gibbosa</i>	X	X
Loranthaceae	<i>Nuytsia floribunda</i>		X
Mimosaceae	<i>Acacia huegellii</i>		X
	<i>Acacia pulchella</i>	X	X
	<i>Acacia saligna</i>	X	
	<i>Acacia sessilis</i>		X
Myrtaceae	<i>Astartea fascicularis</i>	X	
	<i>Beaufortia elegans</i>	X	
	<i>Eucalyptus calophylla</i>		X
	<i>Eucalyptus marginata</i>		X
	<i>Hypocalymma angustifolium</i>	X	
	<i>Kunzea ericifolia</i>	X	X
	<i>Melaleuca incana</i>	X	X
	<i>Melaleuca lateritia</i>	X	
	<i>Melaleuca preissiana</i>	X	X
	<i>Melaleuca thymoides</i>		X
	<i>Melaleuca viminea</i>	X	
	<i>Pericalymma ellipticum</i>	X	
	<i>Verticordia densiflora</i> var <i>densiflora</i>	X	
Orchidaceae	<i>Caladenia flava</i>		X
	<i>Prasophyllum</i> sp	X	
	<i>Pterostylis vittata</i>		X
	<i>Pyrorchis nigricans</i>		X
Papilionaceae	<i>Aotus gracillima</i>	X	
	<i>Bossiaea eriocarpa</i>		X
	<i>Daviesia decurrens</i>		X
	<i>Daviesia physodes</i>	X	
	<i>Gompholobium tomentosum</i>	X	X
	<i>Hardenbergia comptoniana</i>		X
	<i>Daviesia decurrens</i>	X	
	<i>Hovea elliptica</i>		
	<i>Hovea trisperma</i>	X	
	<i>Jacksonia furcellata</i>	X	X
	<i>Jacksonia lehmannii?</i>	X	X
	<i>Jacksonia stembergiana</i>		X
	<i>Jacksonia sericea</i>	X	
	<i>Viminaria juncea</i>	X	
Proteaceae	<i>Adenanthos cygnorum</i>		X
	<i>Banksia attenuata</i>		X
	<i>Banksia grandis</i>		X
	<i>Banksia illicifolia</i>		X
	<i>Banksia menziesii</i>		X
	<i>Conospermum stoechadis</i>	X	
	<i>Dryandra lindleyana</i>		X
	<i>Hakea lissocarpha</i>		X
	<i>Hakea varia</i>	X	
	<i>Petrophile linearis</i>		X

	<i>Stirlingia latifolia</i>		X
	<i>Synaphea gracillima</i>	X	
	<i>Synaphea petiolaris</i> subsp <i>petiolaris</i>	X	
Restionaceae-	<i>Alexgeorgea nitens</i>	X	
	<i>Desmocladius fascicularis</i>	X	X
	<i>Desmocladius flexuosa</i>	X	X
	<i>Hypolaena exsulca</i>	X	
	<i>Lepyrodia glauca</i>	X	
	<i>Lyginia barbata</i>		X
	<i>Lyginia imberbis</i>	X	
	<i>Meeboldina decipiens</i> subsp <i>decipiens</i>	X	
	<i>Meeboldina roycei</i>	X	
Rubiaceae	<i>Opercularia hispidula</i>		X
Rutaceae	<i>Philothea spicata</i>		X
Stackhousiaceae	<i>Tripterococcus paniculatus</i>	X	
Stylidiaceae	<i>Stylidium brunonianum</i>	X	X
	<i>Stylidium</i> sp		X
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i> subsp <i>semibarbata</i>	X	
	<i>Xanthorrhoea gracilis</i>		X
	<i>Xanthorrhoea preissii</i>	X	X
Zamiaceae	<i>Macrozamia riedlei</i>		X

No apparent evidence of dieback occurs on the site.

Wetlands

The Myrtaceae Shrubland contain wetland species and has sufficient wetland function to be described as a wetland. The soils are generally clays in the north, with sand over clays in the south. Water lays on site for variable amounts of time each winter, particularly in the north.

The *Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland forms a transitional unit between the Banksia Woodland at lower elevation and the Myrtaceae Shrubland. However it has sufficient wetland species such as the dominance of *Pericalymma elipticum* - *Hypocalymma angustifolium* to be classified as a wetland.

Neither the *Kunzea ericifolia* Thicket nor the *Melaleuca* Woodland is classified as a wetland. Ground and shrub cover are dominated by species from lower elevation Banksia Woodland such as *Phlebocarya ciliata*. As understorey and ground cover of these communities are dominated by lower elevation Banksia Woodland/sand ridge species these communities are not classified as wetland. As wetlands are identified on the presence of wetland species, and the understorey and shrub layer are not wetlands species, the exclusion of these species is consistent with wetland mapping.

The exception is the small area of *Melaleuca* Woodland in the south western corner where *Melaleuca preissiana* occur over wetland and low Banksia Woodland groundcovers and shrubs. This area also forms a buffer to the *Pericalymma elipticum* - *Hypocalymma angustifolium* Heathland.

The drainage channel is a constructed channel formed by excavation, predominantly along lot boundaries. It commences just east of the wetland and runs along the northern edge before turning north from the north western corner as shown on the aerial photograph which shows general localities. Figure 4. The drain has locally lowered the water tables in the north of Lot 295 and the north east, and reduced the presence of surface water in those areas. Over time these water balance changes will cause gradual changes in the vegetation communities towards more sand ridge (*Banksia* Woodland) vegetation.

The location of these Wetlands is shown on the attached aerial photographs, Figure 1

The wetlands from the Walis Geomorphic Wetland Mapping Dataset are provided at the same scale as the aerial photograph for overlay purposes. The Geomorphic Wetland Mapping Dataset extends wider than the wetlands, extending into areas of Banksia Woodland. Compare Figure 1 with Figure 3 and the attached print from Walis Mapping. Ground mapping is therefore regarded as more accurate.

The quality of wetlands is normally assessed using EPA Bulletin 686, A Guide to Wetland Management in the Perth and Near Perth Swan Coastal Plain Area. This categorises wetlands on natural and Human attributes.

The two wetlands present on site are the western *Pericalymma ellipticum* *Hypocalymma angustifolium* Heathland and Myrtaceous Shrubland, which forms one wetland and the drain which forms a disturbed wet area.

The wetlands are shown on the attached aerial photograph as Community Types Myrtaceous Shrubland and *Pericalymma* - *Hypocalymma* Heath.

Human Attributes

The database of the Department of Indigenous Affairs was searched, and whilst there are archaeological and ethnographic sites in the Pinjarra area none of the Latitude/Longitude values matched those for Lot 259 as taken by GPS. The land is privately owned and was sold to the present owners by the Government. As far as the owners are aware no archaeological or ethnographic sites are known from Lot 295.

It is known that land adjoining to the east has been provided to the local Aboriginal People as the "Aboriginal Association" in Hampton Road to the east.

Question IIIb asks for "registered Aboriginal relics or sacred sites" on the wetland site. As far as is known there are no recorded sites on Lot 295. See attached database from Department of Aboriginal Affairs.

Part I PRESENCE OF RARE SPECIES

No	Item	Western Edge	Drain
I	Rare species	Potentially present. Declared Rare species were noted, but one and possibly two Priority species were recorded	Less likely due to disturbance. No Declared Rare or Priority species were recorded.

Part II NATURAL ATTRIBUTES - seasonal and episodic wetlands

No	Item	Western Edge	Drain
IIbI	Quindalup	No 1	No 1
IIbII	Adjacent wetlands	Limited 3	Yes 0
IIbIII	Habitat Diversity	Yes 3	No 1
IIbIV	Habitat Type	Low thickets, seasonal flooding, adjacent vegetation 3	Adjacent vegetation 1
IIbV	Drainage	No 5	Yes 0
IIbVI	Area of modified wetland	< 10% 5	> 40% 1
IIbVII	Wetland size	< 10ha 1	< 10ha 1
	TOTAL	21	5

Part III HUMAN ATTRIBUTES

No	Item	Western Edge	Drain
III	Aesthetics	Low noise 2	Low noise 2
IIIi	Historic/Arch	Nil 0	Nil 0
IIIii	Security	Private land 1	Private land 1
IIIiv	Protection Groups	Nil 0	Nil 0
IIiv	Passive Recreation	Nil 0	Nil 0
IIIvi	Active Recreation	Nil 0	Nil 0
IIIvii	Human use	Private 1	Private 1
	TOTAL	4	4
	classification	HIGH CONSERVATION BASED ON POTENTIAL FOR RARE SPECIES	MULTIPLE USE

Part IV SUPPLEMENTARY QUESTIONS

No	Item	Western Edge	Drain
IVi	Species Rarity	Less common vegetation communities and two Priority species are present (Yes)	The vegetation communities associated with the drain are common and not "Threatened" (No)
IVii	Effect on land values	May slightly increase land values (Yes)	Unlikely to affect land values (No)
IViii	Human Use	Private land (No)	Private land (No)
IViv	Private human use values	The owner feels that the wetland is an impediment	The owner feels that the drain is an impediment to subdivision and land usage
	classification	Remains as HIGH CONSERVATION based on the quality of the vegetation communities and species	Remains as MULTIPLE USE

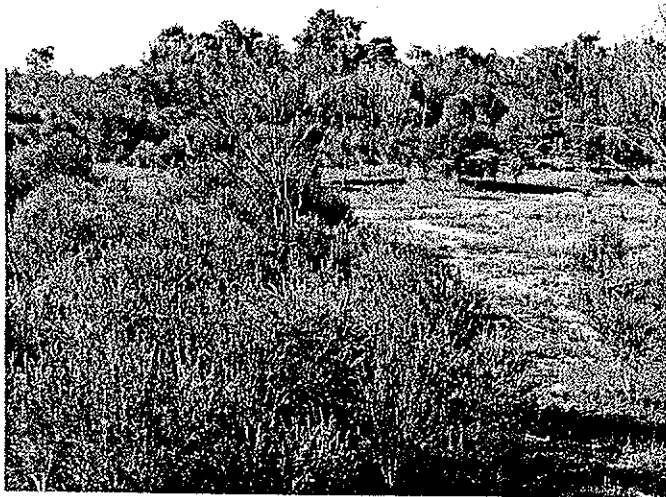
Findings

- The wetland on the western boundary is of High Conservation value because this type of vegetation has predominantly been locally cleared. As such there is potential for the presence of Rare species and there are two Priority species recorded. The vegetation communities of the Guildford Complex are poorly represented and not well preserved in secure reserves.
- The wetland vegetation along the western boundary (*Myrtaceous Shrubland* and *Pericalymma - Hypocalymma* Heath) is in Excellent Condition.
- On the other hand the drainage line along the northern boundary is significantly altered and has limited value. It drains the northern and north eastern areas and has locally lowered water tables and minimised the potential for temporary surface water in winter.
- The drain has potential to be moved, but this needs to be weighed against the potential impact on remnant vegetation.
- Other areas of vegetation on site (*Melaleuca* Woodland and *Kunzea ericifolia* Thicket, with the exception of Mwa on Figure 1) are not classified as wetlands because the understorey and ground cover species are lower elevation sandridge species of Community Type 21c.
- The Geomorphic Wetland Mapping Dataset extends wider than the wetlands, extending into areas of *Banksia* Woodland. Ground mapping is therefore regarded as more accurate.

- Central parts of the site have vegetation in only Fair Condition, possibly due to dieback and weed incursion
- Weeds are spreading from the north east corner and as edge effects along the roadside and firebreaks.
- The sandridge vegetation, which is dominated by Banksia Woodland, it is in generally Good condition, varying from Fair to Good - Excellent.
- Lot 295 was sold by the Government two years ago for subdivision. Therefore flora studies conducted prior to the sale by Government would have classified the significance of the vegetation at the time of sale. As the land was sold it can be concluded that the site was not required for conservation purposes.

Recommendations

1. The vegetation along the western edge of Lot 295 (Myrtaceous Shrubland) is classified as a wetland of High Conservation value. It should be protected, and provided with clearing restrictions, restrictions on fire breaks and possibly conservation covenant.
2. The location of this vegetation, at the rear of lots in that part of the proposed subdivision, makes this level of protection suitable. If the area is further subdivided to urban, as identified by the Shire of Murray, the wetland may have to be excluded, although decisions on this will be delayed pending further assessment at that time.
3. The *Pericalymma* - *Hypocalymma* Heath and Mwa on Figure 1, form a transitional unit between the Myrtaceous Shrubland and Banksia Woodland. Where possible impacts on this vegetation should be minimised.
4. Other vegetation on Lot 295 is variable Condition, but it is recommended that where possible the better vegetation be protected by strategic location of building envelopes in the vegetation of lower condition. This could require clustering and restrictions on clearing.



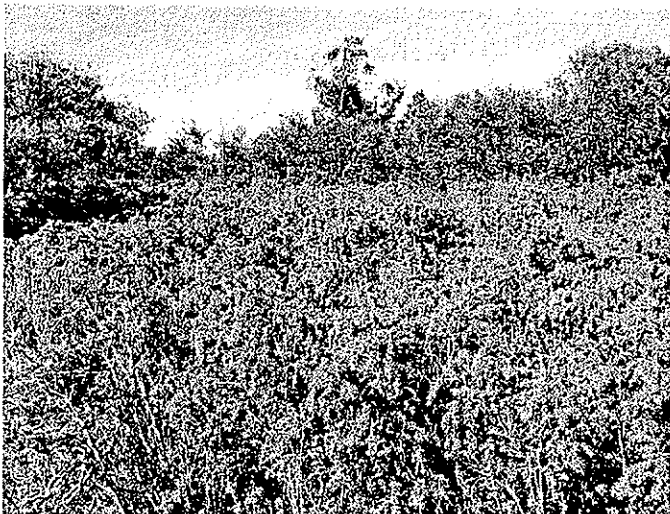
Myrtaceous Shrub Wetland in the north with regrowth following fire



Myrtaceous Shrubland looking towards *Melaleuca proissiana* in the buffer zone



View of the transition zone between the wetland and Banksia Woodland in the background



Myrtaceous Shrubland - wetland in the south western corner with common *Melaleuca incana*



Myrtaceous Shrubland - wetland with common *Viminaria juncea*



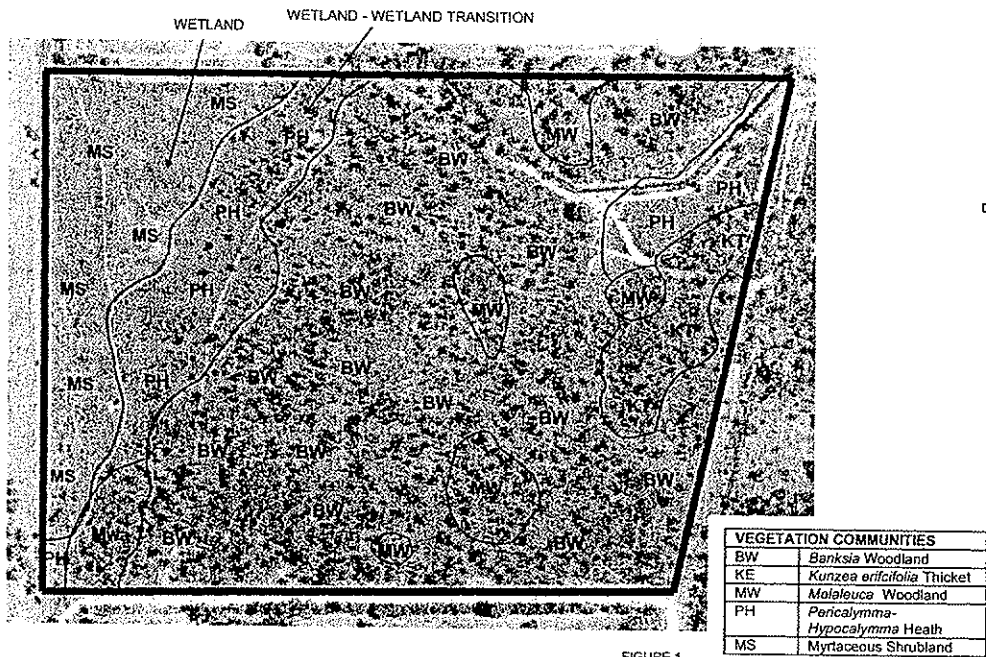


FIGURE 1

VEGETATION ASSESSMENT - LOT 259, ALDERSON ROAD, PINJARRA

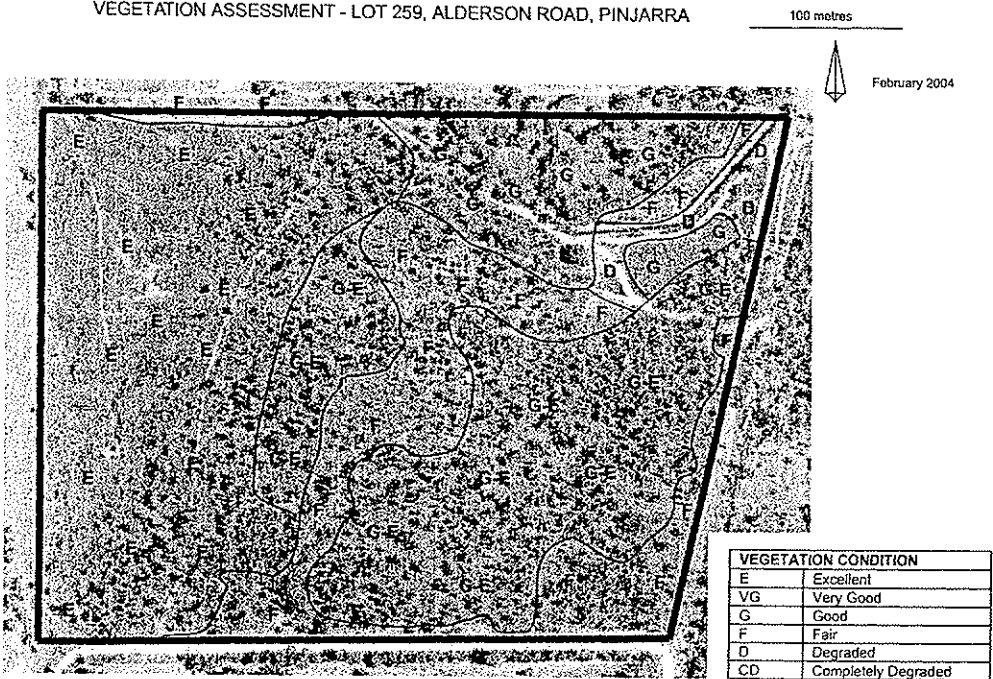


FIGURE 2



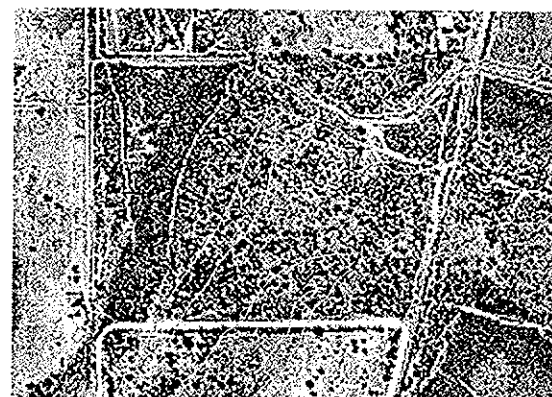
Scale 1 : 12 500 approx

FIGURE 3

Welland Assessment, Lot 295
Alderson Street Pinjarra

The wetlands from the Walls Geomorphic Wetland Mapping Dataset are provided at the same scale as the aerial photograph for overlay purposes. The Geomorphic Wetland Mapping Dataset extend wider than the wetlands, extending into areas of Banksia Woodland. Compare with Figure 1.

Compare to the attached print from Walls Mapping.



Western Australian Planning Commission Act 1985 as read in the conjunction with the Metropolitan Region Town Planning Scheme Act 1959

Peel Region Scheme Amendment No. 012/33A Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary Western Australian Planning Commission Unit 2B, 11-13 Pinjarra Road MANDURAH WA 6210

Submission number 5

I/We, IFAFA PTY LTD & PJ & Y Robertson (Name) (Please print clearly)

of 25 Baker Street, PINJARRA WA Postcode 6208

Contact telephone number 08 9259 5811 Email thauweling@cornerstonelegal.com.au

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

The owners of the above lot object to the inclusion of their land as Regional Open space on the basis of a detailed submission which will be provided prior to the public hearing

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number 295 Street address Alderson Street

Locality (suburb) Pinjarra

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission

Submission form

DEPARTMENT FOR PLANNING AND INFRASTRUCTURE MANDURAH OFFICE 16 DEC 2005 FILE 833-6-16 SPV

Peel Region Scheme
Amendment No. 012/33A
Hearing of Submissions

There will be an opportunity for people who have made written submissions to discuss matters they have raised in their submission by commenting in person to a Hearings Committee.

These hearings are arranged so that the Western Australian Planning Commission can listen to a person should they wish to explain or expand upon their written submission. In the case of a group, a spokesperson to represent the group must be appointed.

A hearing is intended for listening to points of view and planning rationale and is not a forum of general public debate.

All hearings are recorded and transcribed. The transcripts of 'private' hearings remain confidential. All written submissions, transcripts of public hearings and the Commission's report will become public documents.

You do not have to attend a hearing

The comments presented by you in this written submission will be considered.

Please complete the following (indicate by placing a tick in the appropriate box)

<input type="checkbox"/>	NO I do not wish to speak at the hearing (Please go to the end of the form and sign)
Or	
<input checked="" type="checkbox"/>	YES I do wish to speak at the hearings (If you have indicated yes please complete the following details. You will be contacted to arrange a time for your hearing)
<u>I will be represented by</u>	
<input type="checkbox"/>	Myself. My telephone number is (business hours)
Or	
<input checked="" type="checkbox"/>	My agent or spokesperson (an agent may be from a local group)
	Agent's name <u>Tim Hauweling</u>
	Agent's telephone number (business hours) <u>08 9259 5811</u>
	Group's name <u>Cornerstone Legal</u>
	Mailing address <u>11300 Vahland Avenue, Willetton WA 6155</u>
<u>I would prefer my hearing to be conducted in:</u>	
<input type="checkbox"/>	Public (with a public hearing, other persons may attend)
Or	
<input type="checkbox"/>	Private (a private hearing is conducted behind closed doors and only people nominated by you and the Hearings Committee will attend. Material presented at a private hearing will remain confidential)

To be signed by person/s making the submission

Signed [Signature] Date 17/11/05 Signed [Signature] Date 17/11/05

Note: Submissions MUST be received by the advertised closing date, being close of business 5.00pm on Monday 19 December 2005. Late submissions will not be considered.

Contacts: Telephone 9581 4471. Fax: 9581 5491
Internet: www.wapc.wa.gov.au

Western Australian Planning Commission Act 1985
as read in the conjunction with the
Metropolitan Region Town Planning Scheme Act 1959

Peel Region Scheme
Amendment No. 012/33A
Regional Open Space - West Pinjarra

Submission Form

Office use only

To: Secretary
Western Australian Planning Commission
Unit 2B, 11-13 Pinjarra Road
MANDURAH WA 6210

Submission number
7

1/14/06 MATHEW SELBY, DIRECTOR PLANNING & DEVELOPMENT SERVICES (Please print clearly)
(Name)
of SHIRE OF MURRAY, PO BOX 21, PINJARRA Postcode 6208
Contact telephone number 9531 7730 Email

hereby make a submission in relation to Peel Region Scheme Amendment No. 012/33A

The submission is as follows:

See Attachment

DEPARTMENT FOR PLANNING
AND INFRASTRUCTURE
MANDURAH OFFICE
15 FEB 2006
FILE 833-6-16-8

(Please attach additional pages if necessary. Any attachments should be loose rather than bound)

Where the submission relates to a specific parcel of land, please indicate:

Lot number Street address

Locality (suburb)

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other

Please turn over to complete your submission

SUBMISSION BY SHIRE OF MURRAY ON PEEL REGION SCHEME
AMENDMENT NO. 012/33A

Amendment No. 012/33A to the Peel Region Scheme proposes to include Lots 295, 350 and 354 Alderson Street, Lots 299 and 309 Hampton Road and portion of the Alderson Street road reserve, Pinjarra, within the Regional Open Space reservation.

At the meeting on 15 November 2005, the Planning and Development Services Committee considered the proposed Amendment and passed the following recommendation to Council:-

That Council lodges a submission on Peel Region Scheme Amendment No. 012/33A Regional Open Space, Alderson Street, Hampton Road, Pinjarra, indicating as follows:

- 1a) it does not support the rezoning of Lot 354 Alderson Street to Regional Open Space;
 - b) it does not support the rezoning of Lot 295 Alderson Street to Regional Open Space;
 - c) it supports Lot 295 becoming Special-Rural with land management controls for remnant vegetation and wetland protection.
- 2) Council has major concerns over the potential lack of management and maintenance responsibilities for the balance of the landholdings encompassing Lots 309, 299, 350 and 354 'C Class reserves, with particular emphasis placed on fire control measures, rubbish control and unauthorized off-road vehicle access to these areas.
 - 3) The preparation of a Management Plan to address these concerns is considered essential, with liaison necessary between Department of Conservation and Land Management, the Aboriginal Lands Trust and the Shire of Murray over future development and management of these reserves.

At its meeting on 24 November 2005, Council passed a resolution in the terms of the Committee recommendation not to support the proposal.

As outlined above, there is genuine reluctance on the part of Council to support the proposal because without the establishment of very clear

management and maintenance protocols, these areas become an issue for adjacent landowners and consequently a major problem for Council. Past experience has demonstrated that unless the responsibility for management has been laid down, it often falls to Council by default to control fire, rubbish and vehicle use over land which is not directly within the purview of the local government.

In addition to the matters in the recommendation from the Committee to Council, Council's views with respect to the closure of portion of Alderson Street were not made clear. Council's preference would be to allow the road to remain open, though not constructed, for the immediate future or until such time as it is clear how the area will be developed and what road network would need to be provided.

Appendix 4
Transcript of hearings



SPARK AND CANNON

**TRANSCRIPT
OF PROCEEDINGS**

Telephone:

Adelaide	(08) 8110 8999
Hobart	(03) 6220 3000
Melbourne	(03) 9248 5678
Perth	(08) 6210 9999
Sydney	(02) 9217 0999

DEPARTMENT OF PLANNING AND INFRASTRUCTURE

MEMBERS

**MS P. CREEVEY
MR N. NANCARROW
MR P. FITZPATRICK
MR C. SANDERS**

IN ATTENDANCE

**MR J. PRIDE
MS J. LAWN
MS B. KEIGHEREY
MR D. SANDERSON
MR S. VAN SAMBEECK**

HEARING OF SUBMISSIONS

PINJARRA

1.06 PM, FRIDAY, 11 AUGUST 2006

MR R. ROBERTSON appeared on his own behalf

MR T. HOUWELING appeared on behalf of Mr P. Robertson

MS CREEVEY: Good afternoon. Would you like to come and have a seat.
Welcome.

MR ROBERTSON: Thank you very much.

5

MS CREEVEY: Mr Robertson, my name is Paddi Creevey. I'm mayor at the
City of Mandurah and I'm a member of the WA Planning Committee with the
Peel Region Committee. I'd like to introduce councillor Paul Fitzpatrick, and
Paul is with the Waroona Shire and also on the Peel Region Scheme. You
10 would know councillor Nancarrow - - -

MR ROBERTSON: I know that gentleman, yes.

MS CREEVEY: - - - the president of the Shire of Murray. I would like to
15 introduce Mr Colin Sanders. Mr Sanders is an environmental scientist and
hydrologist and he is independent of the commission; Mr John Pride, who is
the senior project planner with the Peel Region Scheme. The gentleman with
the earphones is from an independent company, Spark and Cannon - this is
Anton - and there will be a transcript taken of the hearing. This is Steve who is
20 the secretary.

MR ROBERTSON: Steve, whom I've met, yes.

MS CREEVEY: At the back we have Bronwyn Keighrey. Bronwyn is a
25 botanist with the Department of the Environment, and next to her Justine
Lawn, who is the senior environmental officer, and last but not least we have
Dale Sanderson, who is a senior planning officer with the Department of - - -

MR ROBERTSON: He has been ostracised, has he?
30

MS CREEVEY: I don't know what he had for lunch.

MR ROBERTSON: It looks like it.

MS CREEVEY: But welcome, and just to explain what we'd like to do today:
35 this is a time for you to clarify your submission and tell us your views. We're
here to listen to that and, as you can see, take note of that. It's not a time that
we will be debating the pros and cons of things but we really would like to hear
your views. So I'd like now to invite you to tell us your clarification of your
40 submission.

MR ROBERTSON: All right. Thank you very much. Thank you for inviting
me.

MS CREEVEY: I think we're on a first-name basis, if that's all right with you?

MR ROBERTSON: Yes.

5 MS CREEVEY: Shall we call you Ron?

MR ROBERTSON: Yes, you can.

MS CREEVEY: Fine. I'm Paddi.

10

MR ROBERTSON: I've been called a lot worse. I'd like to thank you people for making the time available, particularly the local government members, because I know you give your time freely. There's one thing I would like to clear up. If you know who owns this land you'll notice that the family names

15

MS CREEVEY: Right. Okay.

MR ROBERTSON: So I don't want any misconceptions about me being a plant or something like that on their behalf. I'm not acting on their behalf. I'm on here as a resident of Pinjarra.

20

MS CREEVEY: Yes, understood.

MR ROBERTSON: But I would like to start off by talking about lot 295, which owned by my family, and that was planned for development when they purchased it and development on that has been refused. I understand the initial refusal for the development of the land was that it contained wetland. That wetland then seemed to shift to rare plants and now it is proposed that it become public open space or parkland and be associated with land on behalf of

30

Aboriginals. So it seems strange to me that we can go from wetland to rare plants to Aboriginal land. The land was advertised by sale for tender along with lot 296 some four years ago by the Department of Housing and Works. So the land was sold - it was owned by the government and it was sold - for

35

With regard to rare plants, there seems to be a bit of a problem in this shire because a number of years ago there was an eastern bypass proposed around Pinjarra and a number one option by Main Roads was refused because it went through a little bit of land that had some scrub on it, which they said contained rare plants, land that was subdivided in the industrial area a number of years ago. As I understand it the last I heard was it couldn't be sold or subdivided any further because it contained rare plants. Lot 295 can't be subdivided because it contains rare plants.

40

5 So with these rare plants seemingly growing up everywhere someone wants to develop, one has to wonder how rare they are. Furthermore, no-one has ever been able to tell me what's the name of these rare plants. So I'm not too sure whether there's any rare plants there at all.

10 From an economic benefit point of view, this land would be much more benefit to the shire developed than it ever will be as bush because they will get rates from it. People will live there, obviously, and have to pay rates on it. Local businesses will get work from it. So the return of money to the shire is going to be a lot more developed than it ever will be left as bush.

15 I've travelled around many parks, national parks, all over Australia, and in my view, unless they've got gorges or mountains or something that people can go to and see that they can't see anywhere else, they're just a liability. They need to have something special for people to visit them, otherwise they end up being a vermin sanctuary. They're also an economic cost to shires for weed control, prevention of rubbish dumping, and it's a cost most shires can do without and I'm sure that the three members on the shires here will know all about what
20 they have to do.

I think personally that this shire is being unfairly treated. The 100-year-flood plan that's been introduced and holding development of Pinjarra up for many years, causing unnecessary height for housing pads. I've lived in Pinjarra
25 33 years, or whatever it is. The water has only come up out of the bed of that river twice in that particular time. Talking to people that were much older than me many years ago, they had never seen it up any higher than what I've seen it either and it never caused any problem.

30 There seems to something about Pinjarra or the Shire of Murray that any time they want to develop anything there always seems to be a problem on this side of the estuary, whereas they seem to be able to be sold on the other side of the estuary for some reason or another. If we want to go back a number of years ago, a TAFE college and perhaps a university was proposed on the eastern side
35 of the estuary. Sorry, that proposal was in (indistinct) Road and that was canned supposedly because of perceived drainage problems. There was a university proposed on the eastern side of the estuary a number of years ago at the end of Greenlands Road. That was stopped going ahead because it was considered it could endanger the ecosystem yet on the other side of the estuary
40 all that land has since been developed for housing. So I can't see the difference between one side of the estuary and the other.

So with these problems the shire, in Pinjarra in particular, has suffered a severe shortage of blocks and has for many years suffered from lack of rental homes and homes to purchase. Anything that goes on the market just disappears.

5 If you want to talk about the rest of the land, not just 295 but all of the land that's in this proposal, and it's sort of proposed to sort of set it aside for maybe one of these days some Aboriginal use. I can see that if that were to occur, in 100 years' time it would still be the same as it is now except it would have a bit more rubbish and cause the shire a lot more problems.

10

A number of years ago - I think it was in 2003 or something like that - the Aboriginal Association applied for funding to build a cultural and heritage centre at a block of land opposite roughly where Pinjarra cemetery is. I don't know whether you're familiar with it. It's across the road from me - because 15 this land is of significance to the Aborigines because of the battle at Pinjarra. Funding for that proposal was refused. Now, I think if you want to sort of do something for the Aborigines, and I think they need it, instead of retaining this land that we're talking about, the proposal for this park, as they call it, then all of that land that's proposed for this park should be sold and developed for 20 houses. That would alleviate the shortage of land in this shire. The money that they get from that could be put into a decent cultural and heritage centre for the Aborigines on South Western Highway rather than right out the back of Pinjarra where no-one is going to see it anyway, and that might provide some employment and somewhere to go forward on behalf of the Aborigines.

25

So if you want to sort of recap on what I'm saying, is I don't think there are rare plants on any of this land. I don't think they exist. I think it's just a farce, personally. I think it has been invented just to stop the development. I think the people that invented it know that they don't stand on a very good footing as far as proving it and so now they've decided, "Well, we're bring the Aboriginal 30 into it." As far as I'm concerned that's a farce also because, as I said, if they want to do something for the Aborigines, sell the land. The money they get from it, build something decent so that it will be viable because you can't build anything viable out on that land there and whatever is proposed, like, you know, walks through the bush or something like that. There's nothing there 35 that people can't see in a million other places.

In case you just think I like knocking down trees, I like trees and I like bush, which is why, as I mentioned earlier, I've been to many national parks. So I don't want to just knock it down because I like knocking down trees. I think 40 what we really need to do is use a little bit of forward thinking, a bit of radical thinking, if you like. I've got - I'll pass it over to you so you can see better what I'm talking about - an aerial photograph - not an aerial, satellite photograph of Pinjarra. If you have a look at Alcoa's residue area, it's bigger than Alcoa town

site. In 1984 I happened to be in Rio de Janeiro and I went on a tour and we were going through the most magnificent jungle and I commented on it because I'd seen plenty of jungle but I'd never seen jungle like this. It turns out that that was a man-made jungle. So you can do it.

5

We're fortunate here in Pinjarra. We have a company (indistinct) for reforestation. I think the Pinjarra refinery, which is operated by Alcoa, has got something like about a 40-year life left in it. At the end of their life all of that land where the residue area is has to be rehabilitated somehow or other.

10 My suggestion is that whoever is the department responsible should be talking to Alcoa and build this into parkland because Alcoa would have the knowledge; would have the ability; it would cost the state nothing. The particular land I'm talking about - you've all seen it?

15 MS CREEVEY: Yes, thank you.

MR ROBERTSON: I don't know whether anyone else wants to see it over there or not, but that land where that residue area is was originally prime farmland. It will never be suitable for housing because of the radioactivity. It's not dangerous but the law, as it stands, you can't build houses on it. Alcoa acknowledge that, so does the rest of the community. So I think what they should be doing now is talking to Alcoa and develop that land into a forest. Part of it, where their freshwater lakes are, could be left as freshwater lakes. You could turn that into a water park. There's a road already out to it. There's a railway already out to it. So at the end of the day, wouldn't that be a wonderful thing for the Hotham Valley Railway to be able to run a train out there?

30 So what I think we need from the people who do our planning is, instead of putting obstacles in people's way, think of a way around how can be achieved that we can get development that we want to get, Pinjarra can expand like it needs to, and we can still end up with a forest. Now, that bit of land where I was talking about the Aboriginal heritage is that little bit there.

35 MS CREEVEY: Yes, right, over near the hospital.

MR ROBERTSON: Yes. So I don't know whether you've got any questions from that or not or whether I've made any impressions but that's my view.

40 MS CREEVEY: I think you've made an impression. Colin, did you have any clarification or question that you wanted to ask?

MR SANDERS: Ron is quite clear in his impression or his view in relationship to the land, mainly to do with 295, but I would ask about the

remaining land which is already in conservation purposes, and it wasn't clear whether you also thought that that should go for development as well.

5 MR ROBERTSON: That's 295 there.

MR SANDERS: That's 295 to here, yes.

10 MR ROBERTSON: Yes. So what I'm saying is that that should be developed, same as people wanted to develop it four years ago when they bought it.

MR SANDERS: Yes.

15 MR ROBERTSON: All of that land there that's got that - what would you call it - strokes across it, the shaded area. So I'm saying all that should be made available for housing, the whole lot.

MR SANDERS: I see. Right.

20 MR ROBERTSON: So you're talking about, what 150 acres at the most?

MR SANDERS: I'll ask one more question then, if I may.

MS CREEVEY: Yes.

25 MR SANDERS: You don't see that the current bushland there, the bushland values, that is, bush and wetland for all the characteristics, they're interconnected, and they do provide a habitat for not only plants but animals, and I (indistinct) exactly which animals, and a transitory place for birds to fly through and something which is different from the farmland/town atmosphere,
30 something different that provides opportunities for natural animals and plants.

MR ROBERTSON: See, I agree with you in part but Pinjarra is surrounded by farmland, as you know. It's very expensive land too, and a lot of it is heavy land as well. All of that land out there is sand plain. The ideal place to build a
35 house is on sand. It doesn't get affected by earth tremors and things like that anywhere near like clay. You don't get cracking in foundations like you do in clay. So that is ideal land to build houses. There is very little land available in Pinjarra to allow it to expand and if you take that land out of it, well, it's even harder. We need our forest but what I'm saying is let's look to the future:
40 develop that land. I'm sure if you talk to Alcoa you could replicate that land on that residue area, be it in 40 years' time. But you wouldn't have to wait that long. All I'm saying is that it will be probably 40 years before Alcoa is finished out here.

5 So I'm not saying that we should end up with any less trees within the shire than we've got now. What I'm saying is we could develop that land, which is within the town boundary, and it would make a very good area to build houses, let the town expand and you can replicate the forest - it's about three kilometres or something - straight out there, not that far. You've got a road going to it, got a railway going to it, and you could make that into a wonderful area.

10 MR SANDERS: Have you any views on what should happen to places where plants of a rare kind - I'm not saying actually rare plants, because that has a statutory interpretation - but a plant of a rare kind, what should happen to them where they're found?

15 MR ROBERTSON: I can't see why you can't regrow it. Alcoa manages to reafforest Pinjarra forest, not only with trees but with all the other species of plants that are there; not only that, they put all the logs back. The native animals return to it, even the ants and the snakes and everything else. There's no reason why you can't build an even better bushland on those lakes than you've got out there. Where the wet lakes are, you could turn that into a water park. Where the dry lakes are, you could turn it into a forest or a bushland or
20 whatever you like to call it, and you won't end up with any less trees or bushland than you've got now.

MS CREEVEY: Noel, do you have any questions?

25 MR ROBERTSON: But if this land was so important, why was it sold in the first place?

30 MR NANCARROW: Yes, Ron, a couple of questions that sort of spring to my mind, and I know the land well: there is a couple of areas that are wet, would you consider that them areas that are wet, which, as you said, dry sandy land is ideal for housing, would you consider that they could be kept as a feature in a subdivision out there and the rest of the land developed around them?

35 MR ROBERTSON: Well, it would depend what sort of a subdivision you have, I suppose. That's something you perhaps have to think about. But, you know, if you think about what you can do, there's no land in Australia that you can't build on - - -

40 MR NANCARROW: No, I understand that.

MR ROBERTSON: - - - from the point of view of "can do" or "can't do". It's a matter of economics or all the other things that go into it. So, yes, if you have a look at a lot of the housing developments as you drive up - well, for instance,

MR HOUWELING: Yes, Mr Pride, how are you? We've certainly spoken a number of times.

5 MS CREEVEY: Steve, who is the secretary to the Peel Region Planning Committee, and the gentleman with the headphones, Anton McKay from the independent company, Spark and Cannon, who will be doing the transcript of the hearing.

10 MR HOUWELING: I've certainly seen you a number of times.

MS CREEVEY: He will be telling us when we're going live. At the back there's Dale Sanderson, the senior planning officer with DPI, and on the other side we have Justine Lorne, who is the senior environment officer, and Bronwyn Keighrey, a botanist from the Department of the Environment. If I
15 could invite you to introduce yourselves, please.

MR HOUWELING: Yes, absolutely. Mr Peter Robertson, land owner - - -

20 MS CREEVEY: How do you do?

MR HOUWELING: - - - of the plot that we're going to be speaking about this afternoon, and Mr - David, now, I'm going to have ask you to say your surname.

25 MR MAIORANA: Maiorana.

MS CREEVEY: Mr Maiorana.

30 MR HOUWELING: Maiorana - I'll probably get that wrong through the course of this afternoon.

MR MAIORANA: A bit of a mouthful.

35 MS CREEVEY: You're from?

MR MAIORANA: From Dykstra Planning.

MS CREEVEY: Dykstra Planning, yes.

40 MR HOUWELING: Town planners.

MS CREEVEY: Yes.

MR HOUWELING: I'm Tim Houweling.

MS CREEVEY: Great. Welcome.

MR HOUWELING: Thank you.

5

MS CREEVEY: I'll just explain to you what we'll be doing this afternoon. As you know, this is a formal hearing. There will be a transcript of the hearing. The hearing is designed for you to clarify your submission and we will be listening to that. We won't be debating but it's very clear that we need to be listening to what you have to say and there will be the transcript and, if need be, then if we need to ask questions for clarification to understand what you're saying then we'll do that. So now I'd like to invite you to speak to your submission and clarify what you'd like to clarify on your submissions.

10

15 MR HOUWELING: Right. Okay. Thank you for that and thank you for the opportunity for an extended period of time for a submission this afternoon. That's gratefully received. I should point out that we are happy, should you wish to go on to the land, for you to do exactly that.

20 MS CREEVEY: Thank you.

MR HOUWELING: There was some communication that we had with the Department of Planning and Infrastructure where they wished to go on to the land independently and take experts with them independently together with the committee. We questioned whether or not that was a breach of natural justice without us being able to attend on the site without our expert being present. So I thought that was worthy of some clarification because I'm not certain the information you've received - - -

25

30 MS CREEVEY: Thank you for clarifying that. I'll just check, are we now recording, Anton? We're now recording?

MR McKAY: Yes.

35 MS CREEVEY: Thank you.

MR HOUWELING: He's listening to music. The question that we've got before us today is a question which in our respectful submission is not one which is determined on the basis of purely scientific evidence, and I think that that represents also the make-up of this committee. For that reason we're also grateful that I'm not sitting in front of a group of scientists presenting the material that we have undertaken in terms of our studies.

For that reason it is our view that in considering what is regionally significant you need to apply your own minds, you need to come with your own backgrounds, your own experiences, you need to approach this and look at it and ask yourselves the questions of what does our community want. I am
5 pleased to note that this committee is made up of persons who are representative of the region, and for that reason it is our view that you ought to apply the knowledge that you have of the region in considering whether or not this is a parcel of land that is necessarily preserved. For that reason we say that scientific evidence alone ought not to be the approach in determining whether
10 or not this land is regionally significant. Now, that doesn't of course mean that we ignore the scientific evidence, and I'll come to that in a moment.

I will tell you from the outset that there is no argument from us that there is a portion of this land that is regionally significant in terms of a portion of the
15 land is wetland. But before I come to that, I would like to have the opportunity briefly to set out some of the background to what has actually transpired here because it is relevant and it should be noted on the public record. The land was owned by the Department of Housing and Works. By way of tender, some - - -

20 MR ROBERTSON: Four years, five years ago.

MR HOUWELING: - - - five years ago, as clarified by Mr Robertson, the present owner of the land - some five years ago the Department of Housing and Works, from the records that we have uncovered through freedom of
25 information, found that the land may be considered to be significant. For that reason the Department of Housing and Works, from the records that we have uncovered through freedom of information, decided that it was necessary to sell the land. We find it curious that a number of years later the land owners (a) were restricted from carrying out a rezoning and development of the land and
30 now (b) that the very same government wishes to retain that land or at least reserve that land for the purposes of regional open space.

Although this is not something that is a basis on which you can form a view as to whether or not the land is regionally significant, and we don't ask you that
35 you do base your decision on whether or not it's regionally significant on that basis, we simply raise the question of if the government back in the year 2001 when this land was sold by the Department of Housing and Works considered or understood it to be significant: (1) why didn't they tell the then owner or future owners of the land; (2) why didn't they allow that land to be valued as if
40 it had no significance; and (3) why didn't they at that particular point in time reserve the land, rather than allowing it to be sold into private ownership for a private land owner to bear the burden - and I say "burden" advisedly, and I will come to that in a moment - the burden of the land now being included as regional open space and being prevented from being subdivided?

I tell you why I say the word "burden". The word "burden" means that somebody is carrying more than their fair share of the load. When a parcel of land is, from your perspectives, as community members, to be included as regional open space, we need to bear in mind that the burden of carrying that responsibility is disproportionately carried. I have significant experience in working with regional open space. The Department of Planning and Infrastructure who is here today will confidently tell you, as members of the committee, that people then have open to them compensation, and they smile at you and they tell you that, "Don't worry, that is what you can do; the people then can claim compensation."

The process, however, members, is not as easy as that. You need to prove (a) that you had a bona fide intention to develop the land, sometimes disputed. You then need to, after lodging development applications - that needs to be refused. The Department of Planning and Infrastructure then makes a decision as to whether or not they wish to acquire the land through an election to purchase or whether or not you simply have to bear the burden yourself through an injurious affection. After that all takes place the person may be able to argue for compensation and in arguing for compensation most people find an unsatisfactory result because they would rather develop the land themselves.

Putting that to one side, the fact that persons are carrying burdens when they actually are asked to hold on to regionally significant land, putting that to one side, people in our state and in our country ought to rightfully (a) know the parcel of land that they're buying and all the significant features surrounding it. When the landowners made inquiries with relevant government agencies as to the significant of this land, including inquiries with this local government, for which we make absolutely no negative comment, they were informed that it was likely that this parcel of land would be rezoned to urban. Now, we make no comment about the fact there was advice that at that point in time the local government was unaware of what was happening within the state government agency. The state government agencies certainly knew it inter-agency.

At that particular point in time it was encumbrant on the state government, in our respectful view, when the parcel of land was to be sold, to inform the future owners that the land possibly had some significant features over it that needed to be explored. The point here is this: these are not landowners who went in with their eyes closed. They made inquiries of the local government. They made inquiries as best they were able to of the other relevant government agencies, including CALM, and were told that there was nothing significant about the land.

Our further inquiries since Mr Robertson has owned the land has found that in 1992 there was a little-known report called Trugden. That report identified the land in some sort of complex. It was vague. It's not referred to in the body of the text of that particular report and the authors of that particular report would
5 have you believe at this particular point in time that the assessment of the vegetation was carried out in accordance with current criteria. Current criteria requires an assessment of the land according to guidelines and there's a guideline number 10. That simply wasn't carried out back in 1992. So we've moved on.

10

It is our view that in determining whether or not the vegetation is of a significant complex necessary for preservation, it is required that current studies be relied upon to determine the significance of the complex of vegetation on that land because, as we well know, vegetation changes over a
15 period of time. We all know that. It is necessary for studies to be carried out in accordance with the guidelines then in place, not guidelines which were in place back in 1992, the current guidelines, and it is necessary for the persons advancing any position that there is significant vegetation to carry out the analysis on that basis.

20

At this particular point in time you'll probably be thinking to yourself, "Well, surely, Mr Houweling, isn't the report that we have seen from various other persons, isn't that inconvenient to the position that you're putting forward at the moment?" We say that the whole site is not regionally significant, and I'm also
25 going to come to that in a moment. I did say that there was a burden carried by individual landowners. I think it's worthy of the committee to at least hear because, as I said at the beginning, it is important that you know that you are members of the community, you need to decide what's regionally significant within your community, not just on the basis of scientific information but in
30 taking all factors into account. I think it's relevant if we at least just hear something from the landowner in terms of the burden it's likely to impose on him and his family, so Mr Peter Robertson.

MR ROBERTSON: Originally we did all of the checks that we could possibly
35 before buying the land. Noel - Mr Nancarrow would know that, with his shire people here, I had at least five meetings with the shire engineer and the head of planning prior to purchasing the land. Michael Middleton and Greg Flugge both helped me actually draw lines on the map of how the land could be subdivided. David will also tell you that even after the submission was made
40 the required further overlaid plans of how the land could be subdivided further in the future. In their understanding of the information they gave me at the time prior to purchasing and after purchasing was that land was allocated for future urban expansion. There was no mention ever that we would have this kind of difficulty or that it was this significant.

5 Even after the process started we were told by one of the botanists for the government when we met them outside the front gate that this would never happen and, "I will see to it," and that was probably the third sentence after meeting them.

MR HOUWELING: Sorry, had they carried out an assessment of the site at that point?

10 MR ROBERTSON: Not at that point. They hadn't even gone inside the fence.

MR HOUWELING: Do you know who that was?

15 MR ROBERTSON: Yes.

MR HOUWELING: Who was it?

MR ROBERTSON: Bronwyn Keighrey. Justine Lorne was there, Glen McLeod-Thorpe was there. I don't know exactly how much time they spent on the property but that would have been roughly 2 o'clock in the afternoon and at 5 o'clock they were not there when I went back to the property. All the way along I've been surrounded by experts and I read all about rare flora but to date I've never seen any proof of rare flora in any report. Most of the reports say "possibility of rare flora".

25 So far it has taken us since 2001 since the process started. We acquired the land in 2002. It has cost me personally \$1000 a month in interest since that time and will continue to do so, which is the burden that Tim was talking about. I also have a partner who would be costly exactly the same amount of money. So, you know, all the way along we have tried to do the correct thing through all of the agencies. We have no scientific proof of any rare flora. The part about being regionally significant, from my view, is an opinion on what is significant or regionally significant as compared to not being significant.

30 I'm not very happy with the process to date and, you know, my son doesn't go to the school that we wanted him to go to purely because of this land, and that's what we did it for in the very first place. We didn't buy the land to farm, we bought it purely to subdivide, no other reason: for lifestyle and economic reasons.

40 MR HOUWELING: Members of the committee, I think you may believe, and some people believe, that a person purchasing land to make a profit must be somehow doing something wrong and, please, I encourage you not to take that point of view. I don't know your individual points of view so I just simply put

5 for that future urban intent for the land by requiring an overlay plan to be prepared over the original originally submitted two hectare subdivision layout which had regard for that future urban use and sought to ensure that the land over time could be further subdivided to accommodate that strategic intent for the land.

10 So we've done quite a bit of work in that respect and during that process, having regard for the studies Mr Houweling has referred to, including the study by Lindsay Stevens, Landform Research, in terms of some of the conservation environmental considerations of the land, and the design had regard for those. Through that earlier design it looked at matters like establishing building envelopes to ensure separation from areas of land that needed to be protected. The special scheme provisions that would have been applied would also ensure vegetation protection through various provisions of the town planning scheme. 15 As well as that there would be protections in terms of drainage management and those sort of other matters that would be associated with the subdivision.

20 Ultimately the scheme amendment did not progress beyond the point whereby which the environmental protection authority determined that the scheme amendment could not be made or the land can not be made environmentally acceptable, and I think at that time there was some direction towards looking at the use of the land as regional open space. We have since and more recently reviewed some of the planning framework and opportunities over the land in the context of the most recent studies that have been done, including that by 25 Vic Samenuk, and again also having regard for the strategic intent for the land.

30 Under the Peel region strategy there was land in this locality identified for urban and in fact the draft local planning strategy that the Shire of Murray is currently preparing, I understand also flags the use of the land or the intent for the land as urban into the future. Certainly in terms of the context of the location of the site relative to the existing town site and also opportunities forwarded by virtue of the existing street framework that surrounds the land on three sides we certainly saw that there would be every likelihood that into the future this land could in fact be used for urban development. 35

40 So on the basis of the framework and the existing information that was available to us, in terms of environmental investigations, we looked at the possibility of accommodating either a special residential type subdivision opportunity over the land, having regard again for the location of significant features, and again through the introduction of scheme mechanisms there could be significant opportunities for protection of vegetation, drainage management and various other development controls and requirements that could be placed on the land.

5 Similarly, we looked at an urban or residential type scenario, again looking at interfaces with the areas that may be required as regional open space and, through design, also examine the manner in which the protection of those qualities could be achieved, again through ensuring public access to those areas, through ensuring correct drainage management at the interface with those land areas and, again, through other mechanisms that Mr Houweling identified, including, you know, whether it be covenants or the identification of specific features of the land that would require protection at all costs.

10 So that probably provides a bit of an overview as to the planning work we've done and most recently how we've examined the land, but certainly if Mr Houweling wants me to clarify any of those details further I'm be happy to do so.

15 MS CREEVEY: Thank you.

MR NANCARROW: Just before you do, what were the options again that you suggest, a special residential?

20 MR MAIORANA: That's right. The original proposal was special rural but more recently we've looked at the progression of matters like the planning strategy by the Shire of Murray. So we looked at a special residential type scenario plus a fully serviced residential type scenario which would be consistent with the strategic direction that we've investigated and looked at
25 over the land.

MR NANCARROW: Thanks.

MS CREEVEY: Mr Houweling?

30 MR HOUWELING: I should say that the land is still shown in the draft scheme text of the Shire of Murray as urban land. Members of the committee, I am aware that time is up and I never wish to seek your indulgence beyond any time with which we've been allotted. Far more could be said. Far more may be
35 said. We thank you for the opportunity for listening this afternoon. We would be very pleased if there were some questions that we might be able to assist the committee with. Otherwise we'll be happy to assist in any other way.

40 MS CREEVEY: Thank you, Mr Houweling. Paul, did you have any questions?

MR FITZPATRICK: No, I don't.

MS CREEVEY: Noel?

MR NANCARROW: No. The only thing that I would like to just clarify: if this went ahead as development, you would be happy to put the wetlands to one side and fit them in to your development.

5

MR ROBERTSON: Depends on how much is classed as significant wetlands. The part that I understand as being significant is the western portion, north-western corner. I understand that that is significant. The others, I do not understand why there would be any regional significance in them at all. Even in Vic Samenuk's report it said that it has got love grass and watsonia growing through wetland number 1, and I don't see that they would really have much significance. Wetland number 4 in his report, I can understand is wetland and, yes, we can possibly give up some of that land, but I don't see why the other three would be regionally significant, and if you do go onto the site without a map I would like you to find wetland number 2, if you can. So, yes, we would move on letting number 4 be a wetland.

10

15

MS CREEVEY: Thank you. Colin?

20

MR SANDERS: Yes, thank you, chair. Look, while recognising that substantially your submission both orally and in writing has been about lot 295, what view to you actually have about the adjoining lots, 350, 354, within a regional context?

25

MR HOUWELING: We obviously haven't been asked to examine the neighbouring land. That is not a part of what our task has been in examining the parcel of land, you're quite right. What were you hoping that we would advance by way of an answer to that? You would say, from the scientific community, it's floristically similar and therefore - - -

30

MR SANDERS: Is a continuous relationship.

MR HOUWELING: Continuous relationship.

35

MR ROBERTSON: There is also the same on lot 296 on Hampton Road, which is not even in this, and I'm sure Bronwyn Keighrey and Justine Lawn will say that there is other land that is not included in this which is identical.

40

MR HOUWELING: We would accept there's a continuous relationship with all of the land surrounding, including the industrial land surrounding next door. So a continuous relationship needs to be borne in mind in terms of context, and that context is this: you need to look at the land not in isolation by just turning your mind to the lots that you've identified. That, scientifically, may be an approach. However, I'm grateful that this committee has the opportunity and

5 that members of the community are appointed to a committee to bring to bear their expertise and experience as people, and that is really our last line of defence, so to speak, against science taking over the world and telling us that every parcel of land that we live on is so significant that we had all better move off out of this country.

10 Look, there is a scientific argument to say that we should, but I simply make the point that we must look at what it is that we as a community wish to protect. For that reason I come back to the point that I started out with today, and that is community members are here present, and esteemed community members are here present, and their minds, in applying and considering the argument, are of equal if not greater weight than a pure scientific approach to the determination of whether or not this land is to be considered to be regionally significant. I don't say that with any disrespect to your
15 qualifications. I have to point that out.

MR SANDERS: But you're upholding the view that one could put planning views above scientific views in the decision as to whether this is an area that ought to go for regional open space.
20

MR HOUWELING: No, you misunderstood.

MR SANDERS: No?

25 MR HOUWELING: I am saying that the land must be examined with not just turning to look at the continuous boundaries to one side; you turn to look at the continuous boundaries also on the other sides. So you must examine the land, not just by drawing a box along cadastral boundaries that way, you look at it holistically. Then I accept, if you say to me, "But isn't there then competing arguments within that?" and I say, "Absolutely." That's precisely where we as
30 humans have the interface with the community and the environment and everything else in which we live. I'm not placing one on the scale of more importance than another.

35 Very quickly, I recognise that in the 1800s planning was purely private. You simply tried to separate out the smelly areas of town from the good areas of town. Light and air was the way. So it was purely at that particular point in time separating out different - - -

40 MR SANDERS: And aesthetic quality.

MR HOUWELING: - - - private land uses. Then we went into the garden city approach in the 1920s where we said, "Garden city: planning for planning's sake is good and we believe that that's the case." In the last 10 years or 15

years the environment has taken such an importance in respect of the planning of our environment that it now almost overtakes everything in terms of what we're able to do and some reasonableness needs to be applied in the whole gamut of what is reasonable.

5

What we've presented here today are some private planning mechanisms which are still recognised and useful. We have presented a planning argument which is still recognised and useful and we have to have regard to that. We have presented the social aspect, through Mr Robertson, and probably I've said, "Look, the economic aspect is not to be regarded too highly": somebody wants to make a profit out of this. There's nothing hidden about that. Why not? Some people tell us we're wrong in saying that. I don't think so, not at all.

10

MR SANDERS: I think you were fairly honest in putting that view.

15

MR HOUWELING: Is there something wrong with the view?

MR SANDERS: No.

20

MS CREEVEY: No.

MR SANDERS: You're up front putting the view.

MR HOUWELING: Well, we are.

25

MS CREEVEY: Thank you again and thank you, all of you, for putting such a comprehensive clarification of that submission. I think you've made your points extremely coherently and we certainly have taken note and, as you can see, it has been recorded. I am mindful of your offer and we will certainly consider that. So could I thank you for taking the time to come in and for the quality of your submission.

30

MR HOUWELING: May we thank each and every one of you.

35

MS CREEVEY: Nice to meet you. Thank you very much.

MR HOUWELING: Thank you.

MATTER ADJOURNED AT 2.23 PM ACCORDINGLY

Schedule 1

List of submissions

Schedule 1

Index of submissions

Submission number	Form 33A	Name	Nature of submission		Comment	Hearing requested
			Support	Oppose		
1	no	Department of Indigenous Affairs (Monique Pasqua)	N/A	N/A	Advises there are indigenous heritage sites in the project area and provides comments in relation to any development.	no
2	no	John and Deanne Hazelden	N/A	N/A	Comments provided in relation to pedestrian/cycle access, drainage and land management.	no
3	yes	Ron Robertson	-	yes	Objects to the proposed amendment, conveying views regarding economic merit of the proposal, proposing sale of the land and dedication of the proceeds to another indigenous site, need for development in the Shire of Murray, the presence or otherwise of rare plants on the amendment site and querying the sale of Lot 295 by Department of Housing and Works.	yes
4	no	Department of Indigenous Affairs (Beth Hughes)	yes	-	Supports inclusion of Lots 354, 299 and 309 Hampton Road in the regional open space reservation. Advises that these lots have significant indigenous cultural and heritage values.	no

Submission number	Form 33A	Name	Nature of submission		Comment	Hearing requested
			Support	Oppose		
6	no	Department of Conservation and Land Management (CALM)	yes	-	<p>No objection to inclusion of Lot 350 (which is vested in Conservation Commission) in the regional open space reservation.</p> <p>Based on the area's conservation values, CALM supports the amendment as proposed.</p>	no
Late submission	yes	Shire of Murray	-	yes (Lots 295 and 354)	<p>Inclusion of Lots 295 and 354 in the regional open space reservation is not supported.</p> <p>Rezoning Lot 295 to special rural with land management controls is supported.</p> <p>The council has concerns about management arrangements for the land</p> <p>Prefer Alderson Street to remain open (unconstructed) until it is clear how the area will be developed and what road network will be needed.</p>	no

Schedule 2

Summary of submissions and determinations

Schedule 2

Peel Region Scheme Amendment 012/33A Summary of submissions

Submission: 1

Submitted by: Department of Indigenous Affairs (Monique Pasqua)

Nature of interest: State government department

Affected land: Lot 350 is vested with the Department of Conservation and Land Management (now Department of Environment and Conservation) for 'conservation and protection of Aboriginal heritage', and Lots 299, 309 and 354 are vested in the Aboriginal Lands Trust for the 'use and benefit of Aboriginal inhabitants'

Summary of submission:

- 1 There are three recorded heritage sites in the area, including camping/hunting places, artefacts scatter and skeletal/burial material.
- 2 It is recommended suitably qualified consultants be engaged to conduct ethnographic and archaeological surveys of the area prior to any development, to ensure that sites are identified and/or avoided.
- 3 It is our preference that any development plans are modified to avoid damaging or altering any site.

Planning comment:

- 1 Inclusion of Lots 295, 350, 354, 299 and 309 within the regional open space reservation is proposed as it will bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.
- 2 During investigations, prior to advertising of the amendment, consultation took place with representatives of the Department of Indigenous Affairs, the elder of the local Aboriginal community (Mr Joe Walley) and with the Pinjarra Aboriginal Community Action Group. The amendment does not propose or directly facilitate any immediate development of the land. Lot 350 is vested with Department of Environment and Conservation (DEC) for 'conservation and protection of Aboriginal heritage', and Lots 299, 309 and 354 are vested in the Aboriginal Lands Trust for the 'use and benefit of Aboriginal inhabitants'. Any further development of the land would require consent from these entities and, if the amendment comes into effect, approval from the WAPC.

3 See planning comment 2.

Determination:

- 1 Noted.
 - 2 Noted.
 - 3 Dismissed.
-

Submission: 2

Submitted by: John and Deanne Hazelden

Nature of interest: Owners of nearby land

Affected land: Lot 7 Alderson Street, Pinjarra

Summary of submission:

- 1 If the segment of Alderson Street affected by the amendment is not to be constructed, can a walking/cycle path be constructed, to provide a connection between the northern and southern segments of the road?
- 2 Drainage matters need to be addressed. Stormwater drains from the eastern side of Hampton Road to the southern side of Lot 350 and into adjoining lots. The Alderson Street drain at the northern end of Lot 350 is always blocked because of cars and motorbikes crossing it.
- 3 Lot 350 requires burning to reduce the fire risk from undergrowth and vehicles using this lot

Planning comment:

- 1 The amendment does not predicate (or prevent) any particular pedestrian and/or cycle linkage(s) within the proposed regional open space reservation. If the proposed amendment comes into effect, linkages of this nature would need to be consistent with a management plan for the land and this would require approval from the WAPC.
- 2 The need to address these drainage considerations, or otherwise, will exist with, or without the proposed amendment taking place.
- 3 The need to burn Lot 350, or otherwise, will exist with, or without the proposed amendment taking place. Vehicles should not be accessing Lot 350 for any purpose other than land management. Control of access to

the land is the responsibility of the management authority and the amendment is unlikely to alter this situation.

Determination:

- 1 Noted.
 - 2 Noted.
 - 3 Noted.
-

Submission: 3

Submitted by: Mr Ron Robertson

Nature of interest: Pinjarra resident

Affected land: Lots 295, 350 and 354 Alderson Street and Lots 299 and 309 Hampton Road

Summary of submission:

- 1 The economic return from this land will be of far more use to the Shire of Murray if it is developed than if it is retained as bushland. (eg rates, money for local businesses and the area, schools, sporting bodies). Economic return from open space areas is low unless there are attractions such as mountains and gorges. Also, small open space areas add costs to the local government for management.
- 2 Lots 299, 309, 350 and 354 should be sold and the money used to build a viable Aboriginal heritage/cultural centre on Crown Reserve 31032 (where the Battle of Pinjarra took place). This centre will be of more benefit to the Aboriginal community than a few acres of bush.
- 3 This is another example of Pinjarra and the Shire of Murray being unfairly treated. This imbalance needs to be considered in order for development in the shire.
- 4 According to *The Western Australian*, Ms MacTiernan has advised that 60% of all future residential development will be within existing cities, leaving 40% in the remainder of the State. We need development away from the coast and housing costs kept down.
- 5 Rare plants are stated as a reason why these lots should be reserved as regional open space. How rare are these plants and what are they are called? I have never been able to find these anywhere, or anyone who can name them.

- 6 Lot 295 was sold by the Department of Housing and Works (DHW) about three years ago. However, the amendment report states the land was known as a natural resource protection area in 1997. Why was the land sold? Was it wrong to sell it? The amendment report never mentions that this land was sold quite recently.

Planning comment:

- 1 While financial matters receive appropriate consideration, economic return is not the principal determinant in relation to the reservation of land for regional open space. In this case, the value of the land for regional open space purposes relates to its value for conservation purposes, Aboriginal culture and regional landscape.
- 2 Lots 299, 309, 350 and 354 and Crown Reserve 31032 have specific significance in terms of indigenous history and culture, and need to be protected by regional open space reservations. Bushland holds significance in Aboriginal culture.
- 3 The interests of Pinjarra are not measured only in relation to the amount of development that may occur but in terms of the overall balance and structure of land use. As part of the overall land use pattern, reservation of this land for regional open space will be in the long term interest of Pinjarra, through the benefits referred to in planning comment 1.
- 4 Considerable areas have been identified for residential development in the Shire of Murray, including Pinjarra. Also, see planning comment 3.
- 5 The reasons for reservation of the land relate to its values for conservation purposes, Aboriginal culture and regional landscape. In relation to conservation values, the area is significant because it contains significant remnant vegetation, upland and wetland areas, and rare and other significant flora. A series of publications, publicly-available reports and websites describe and map the vegetation complexes and significant flora of the Swan Coastal Plain, including Heddle *et al* 1980, Keighery and Trudgen 1992, Gibson *et al* 1994, Bush Forever, the DEC florabase website and the Western Australian Local Government Association Perth biodiversity project website. The species found on the amendment site have been identified in the System 6 Update Survey Programme, 1995 and recent surveys of Lot 295 by Landform Research.
- 6 Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land in the regional open space reservation.

For information, DHW has advised that documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and

satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

Determination:

- 1 Dismissed.
 - 2 Dismissed.
 - 3 Dismissed.
 - 4 Noted.
 - 5 Noted.
 - 6 Noted.
-

Submission: 4

Submitted by: Department of Indigenous Affairs (Beth Hughes)

Nature of interest: State government department

Affected land: Lot 350 is vested with DEC for 'conservation and protection of Aboriginal heritage', and Lots 299, 309 and 354 are vested in the Aboriginal Lands Trust for the 'use and benefit of Aboriginal inhabitants'

Summary of submission:

- 1 The Department of Indigenous Affairs supports the rezoning of Lots 299, 309 and 354 as these reserves hold significant cultural and heritage values for local indigenous people and the rezoning will allow better protection of these values.
- 2 The proposal is also supported as it will not prevent the local indigenous community from using the area for activities such as cultural tours, interpretive centre, walk trails and passive recreation.

Planning comment:

- 1 Inclusion of the land within the regional open space reservation was proposed as it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

- 2 Reservation of the land would accommodate some development associated with Aboriginal heritage and education values in the portion of Lot 354 where conservation values are limited. The amendment will not prevent walk trails or passive recreational activities. However, these would need to be consistent with a management plan for the land and would require approval from the WAPC.

Determination:

- 1 Noted.
 - 2 Noted.
-

Submission: 5

Submitted by: Mr Tim Houweling of Cornerstone Legal on behalf of Ifafa Pty Ltd and Peter John and Yvonne Robertson

Nature of interest: Legal representative for owners of Lot 295

Affected land: Lot 295 Alderson Street, Pinjarra

Summary of submission:

- 1 Inclusion of Lot 295 as a wetland by the DEC is based on mapping undertaken for Wetlands of the Swan Coastal Plain. This mapping used a broad based approach and for that reason can be reviewed by the DEC. Wetlands of the Swan Coastal Plain can not be relied on as errors have been found in the methods used to gather and record information.
- 2 Two environmental reviews of the subject land have been undertaken on behalf of the owners:
 - (i) Mr Lindsay Stephens (of Landform Research); and
 - (ii) Dr Vic Semeniuk (V & C Semeniuk Research Group).

Dr Semeniuk and Mr Stephens agree to a regionally significant wetland on the western boundary of Lot 295 and Dr Semeniuk identifies two additional regionally significant wetlands on the land.

It is evident from the reviews by Mr Lindsay Stephens and Dr Semeniuk that inclusion of Lot 295 within a regional open space reservation for wetland purposes has not been supported by a ground analysis.

- 3 Areas not environmentally significant or with no regional features should not be reserved as regional open space. If the WAPC includes areas as regional open space with no evidence supporting the inclusion, then a review by way of writ of certiorari in the Supreme Court is available.
- 4 Quite clearly, a writ of certiorari is not the preferred option and the owners of Lot 295 are prepared to have portions of their land reserved as regional open space where the balance is zoned for urban development.
- 5 The land was sold by the DHW concealing the fact that it was, or may have been considered environmentally significant.
- 6 At the hearing, we reserve the right to present further evidence as a result of our freedom of information requests and additional time is requested rather than a brief hearing.
- 7 There is no evidence to suggest the land should be included within a regional open space reservation and no detailed on-site assessment has been undertaken (apart from those carried out by Mr Lindsay Stephens and Dr Vic Semeniuk on behalf of the owners).
- 8 To include Lot 295 within the regional open space reservation on the basis that it is considered regionally significant for environmental reasons would be an error of law reviewable by the Supreme Court.

Planning comment:

- 1 The wetlands on Lot 295 have been reviewed, in terms of delineation and evaluation, on several occasions since mapping for the publication Wetlands of the Swan Coastal Plain was undertaken. These reviews include the following :
 - Wetland assessment for Lot 295 Alderson Street, Pinjarra by Landform Research in support of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171.
 - Review of geomorphic Wetlands Swan Coastal Plain dataset for Lot 295 Alderson Street, Pinjarra conducted by DEC in response to a request for reclassification by the landowners' planning consultant.
 - Investigations for the formal environmental assessment of Shire of Murray Town Planning Scheme No. 4 Amendment No. 171.
 - Report on the Wetlands, Lot 295 Alderson Street, Pinjarra by V & C Semeniuk Research Group, commissioned in support of this submission.

Notwithstanding any variation in detail between the subsequent reviews, all conclusively indicate the presence of regionally significant wetlands on Lot 295.

- 2 The conservation value of wetlands on Lot 295 is not the only reason to include this land in the regional open space reservation. Reservation of

the area has been proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape. The conservation values of Lot 295 relate to the presence of wetlands, uplands, remnant vegetation (range and quality) and wildlife habitat. All parts of Lot 295 require protection in relation to some or all of these values. In regard to wetlands only, assessments by the consultants commissioned by the landowners and ground analysis by experts from State government agencies all show that regionally significant wetlands exist on Lot 295.

- 3 Land may be included in the regional open space reservation for the purposes set out in clause 10(a) of the PRS. This states that the purpose of the reservation is to protect the natural environment, provide recreational opportunities, safeguard important landscapes and provide for public access. Comments regarding possible legal options are noted.
4. Most of Lot 295 has conservation values relating to wetlands and remnant vegetation together with landscape values relating to the whole of the site. Use of any portion of Lot 295 for urban development would conflict with conservation, recreation and landscape values that would be available through the assemblage of a contiguous 43 hectare area of regional open space comprising a combination of wetlands and uplands, including a range of vegetation types and habitat values.

Moreover, urban uses would have a detrimental effect on the condition of the wetlands and vegetation in terms of edge effects and management problems.

- 5 Details of transactions relating to the sale and/or purchase of land are not considerations that relate to the merits of including the land within the regional open space reservation.

For information, documents signed by the purchasers state that the vendor made no representations in regard to the zoning, development potential or any environmental issues that may affect the land and that prospective tenderers must make their own enquiries and satisfy themselves on these issues. Information relating to environmental considerations was available in readily-obtainable, published documents. The limitations of the land for development were taken into account by the Valuer General's Office when determining the value of the land.

- 6 Noted. Additional time was allocated.
- 7 Reservation of the area was proposed because it would bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape.

In a purely environmental context, the area is considered locally and regionally significant because of the quality and range of vegetation types, including wetland and upland areas, the presence of significant and rare

flora, and its wildlife habitat value. The significance of these considerations is greatly increased by the amount of clearing that has taken place in the area and by the presence of conservation category wetlands on Lots 295 and 350.

Lot 295 has self-evident landscape value. Successive reviews over the past fourteen years have reiterated the conservation values of the land. In this respect, Lot 295 has been inspected by numerous experts (including Mr Stephens and Dr Semeniuk) on numerous occasions.

8. See planning comment 3.

Determination:

- 1 Noted.
- 2 Dismissed.
- 3 Noted.
- 4 Noted.
- 5 Dismissed.
- 6 Noted.
- 7 Dismissed.
- 8 Dismissed.

Submission: 6

Submitted by: Department of Conservation and Land Management (now DEC)

Nature of interest: State government department

Affected land: Lot 350 Alderson Street

Summary of submission:

- 1 Lot 350 is reserved under section 5(1)(g) of the *Conservation and Land Management Act 1984*. The purpose of the reserve is 'conservation and the protection of Aboriginal heritage and culture' and is vested in the Conservation Commission of Western Australia and managed by CALM.

- 2 The department has no objection to the proposal and notes that this will make it consistent with other CALM-managed conservation areas in the Peel region. Similarly, based on the areas conservation values, the department supports the amendment as proposed.

Planning comment:

- 1 Inclusion of the land in the regional open space reservation of the PRS is consistent with its purpose under the *Conservation and Land Management Act 1984*.
- 2 The advice from DEC is consistent with the purpose of the amendment.

Determination:

- 1 Noted.
 - 2 Noted.
-

Submission: Late submission

Submitted by: Shire of Murray

Nature of interest: Local government

Affected land: Municipality of the Shire of Murray

Summary of submission:

- 1 Inclusion of Lots 354 and 295 Alderson Street in the regional open space reservation is not supported.
- 2 Rezoning of Lot 295 Alderson Street to special rural, with land management controls in relation to remnant vegetation and wetland protection, is supported.
- 3 The council has major concerns regarding the potential lack of management and maintenance responsibilities in relation to Lots 309, 299, 350 and 354 with particular emphasis on fire control, rubbish control and unauthorised off-road vehicle access. Preparation of a management plan is essential, including the assignment of responsibility for these matters, to ensure the responsibility does not default to the Shire of Murray.
- 4 Prefer the Alderson Street road reserve to remain open, as an unconstructed road reserve, until it is clear how the area will be developed and what road network would need to be provided.

Planning comment:

- 1 Lots 354 and 295 are two of the five lots proposed to be reserved as regional open space. Inclusion of the five lots within the reservation is proposed as this will bring together 43 hectares of contiguous land with high value for conservation, Aboriginal culture and regional landscape. These values apply to the 43 hectare area as a whole, with Lot 354 having particular value in terms of Aboriginal heritage and Lot 295 having particular value in terms of vegetation and wetlands.
- 2 In December 2004, the Environmental Protection Authority advised that amendment No. 171 to the Shire of Murray Town Planning Scheme No. 4 - which sought to rezone Lot 295 from rural to special rural - had been determined under section 48A of the *Environmental Protection Act 1986* as being incapable of being made environmentally acceptable, due to the following (in brief) :
 - Clearing of vegetation deemed to be regionally significant - This referred to the quality and diversity of vegetation, combination of wetland and uplands, significant flora and habitat value for regionally-significant birdlife; and
 - Impacts on wetlands - This referred to the naturalness, quality and diversity of vegetation, contiguity with upland vegetation, habitat value and significant flora.

Following the consideration of the amendment and consultation in accordance with the legislation, the Minister for the Environment issued a statement under section 48A(2)(b) of the *Environmental Protection Act 1986* that amendment No. 171 should not be implemented.

The nature and distribution of wetlands and vegetation and associated buffer requirements, are such that rural residential development could not take place on Lot 295 without unacceptable effects on these values. The WAPC considers it would not be possible to avoid these adverse effects through changes to the subdivision design and use of land management controls.

- 3 It is agreed that appropriate management arrangements will be necessary. However, the matter of future management arrangements does not detract from the need to include the land in the regional open space reservation, to protect its conservation, Aboriginal culture and regional landscape values. Once all of the land that is subject of the amendment is in public ownership (ie. on acquisition of Lot 295), the WAPC will initiate discussions with DEC, the Department of Indigenous Affairs/Aboriginal Lands Trust and the Shire of Murray to establish a management plan for the land.
- 4 Although the amendment does not directly propose to close the affected portion of Alderson Street, its closure could be expected in due course. The through-connection of Alderson Street is not considered essential to the overall road network in the locality. Relative to the planned land uses

for the area in the Shire of Murray's Pinjarra Urban Expansion Strategy (and having regard for the effect of including the land in the regional open space reservation) strong north-south links will exist through Pollard Street (when constructed) and Hampton Road.

Determination:

- 1 Dismiss.
 - 2 Dismiss.
 - 3 Noted.
 - 4 Noted.
-

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