



LESCHENAULT INLET MANAGEMENT AUTHORITY

Northern Leschenault Estuary Foreshore Management Plan



WATER RESOURCE MANAGEMENT SERIES

WATER AND RIVERS COMMISSION REPORT WRM2

1997

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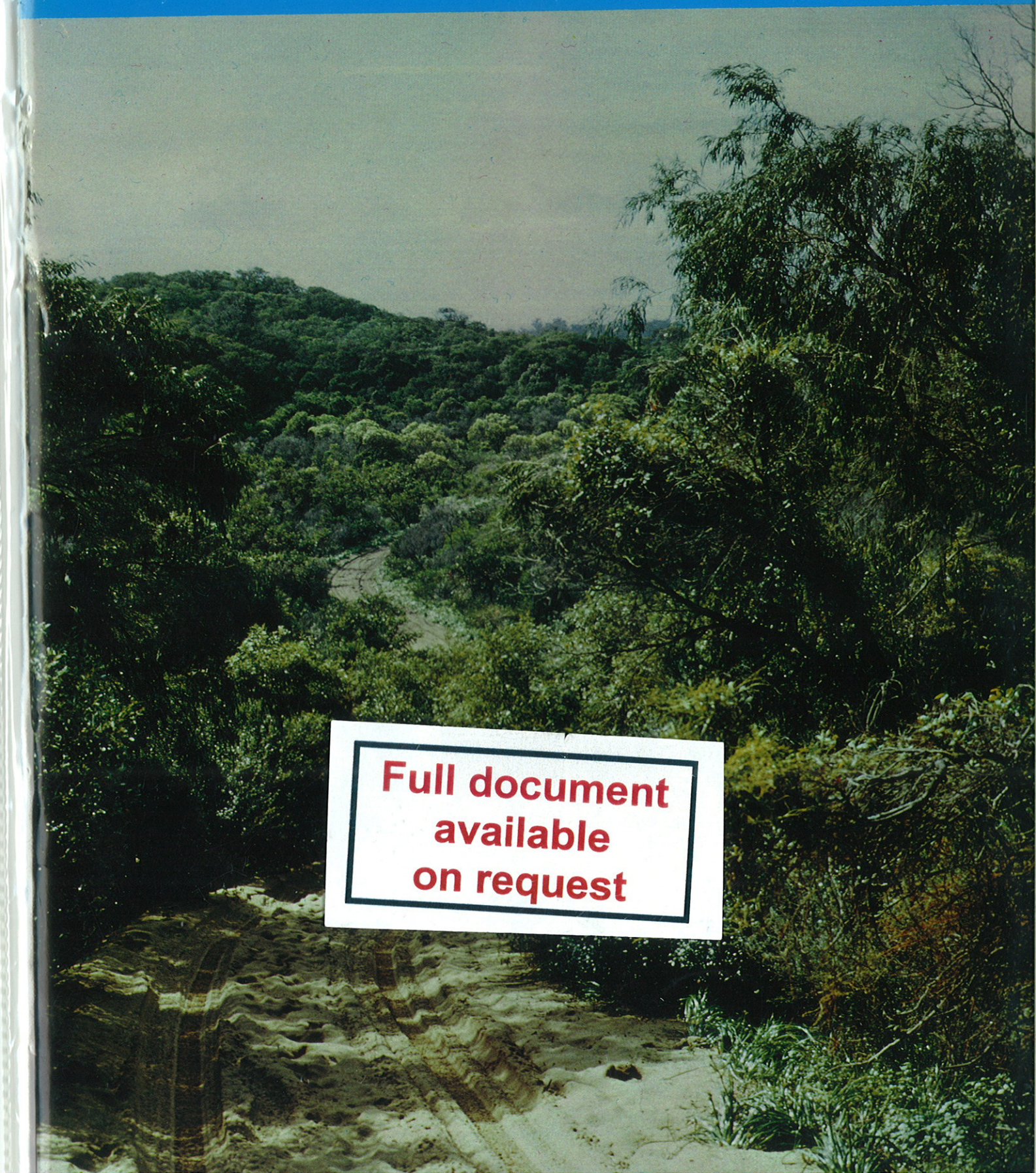
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Flora and Vegetation of the Leschenault Peninsula



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UNITED DEVELOPMENT CORPORATION

AN ENVIRONMENTAL APPRAISAL
OF
LESCHENAULT INLET

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JANUARY 1972

ENVIRONMENTAL RESOURCES OF AUSTRALIA

5.5 VEGETATION OF THE LESCHENAULT INLET

The vegetation formations of the Leschenault Inlet are typical of the South-west Province (Gardner, 1942 : Wilson, 1971). The species composition of each habitat is correlated with soil type and climate, particularly water availability. The vegetation of the inlet is readily classified into six associations as follows (See Figure 6) :-

(1) Mobile Dunes

The mobile dunes of western peninsula of the inlet have a sparse, sand-dune scrub. These dunes form frequent "Blow-outs", which penetrate over the consolidated stable dunes. (Plate 1).

(2) Stabilised Dunes

The stable dunes of the western peninsula are vegetated with an open woodland composed mainly of Tuart (Eucalyptus gomphocephala) and Peppermint (Agonis flexuosa), (Plate 1).

The calcareous sands of the western peninsula belong to the Quindalup Association (Bettenay and McArthur, 1960), and are discussed in Section 5.4 in greater detail.

(3) Salt Marsh

There are extensive salt marshes bordering much of the margin of the inlet (except where freshwater swamps occur, e.g. the northern head of the inlet). The marshes have a varied assemblage of salt-tolerant (halophytic) plants. The predominant plants are chenopods, rushes (Juncus spp.) and the salt tolerant she-oak (Casuarina obesa). (Plate 3).



Plate 3.

Salt marsh on the eastern slope of Leschenault Inlet. Sedge in the foreground is predominantly Juncus maritima, with Casuarina obesa (1), the salt tolerant sheoak. The line of paperbarks (2), (Melaleuca raphiophylla) occurs behind the sedges.

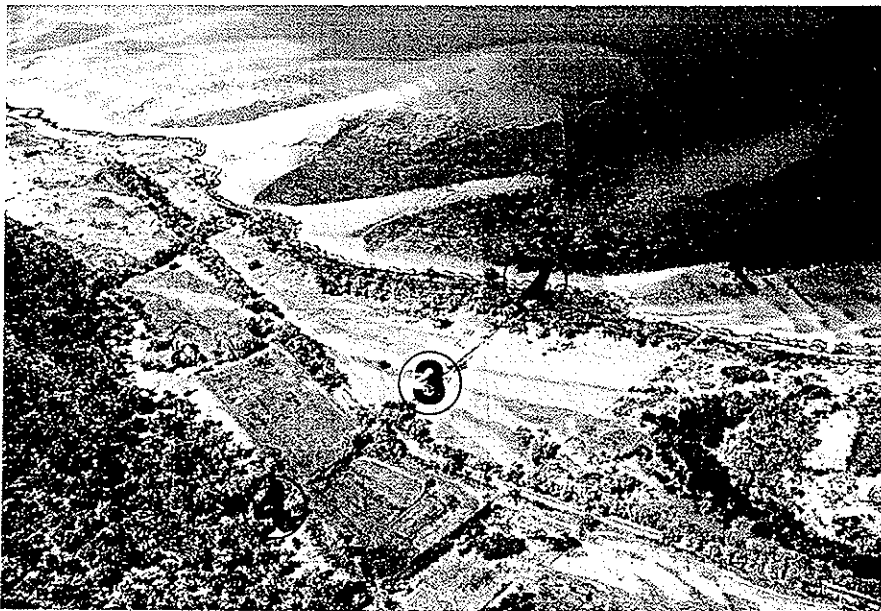


Plate 4.

Aerial view of proposed UDC development site. (1) Shallow estuarine sand flats with patches of seagrasses and algae. (2) Salt marsh with sedges and sheoaks, bordered by paperbarks. (3) Western and eastern pasture and Old Coast Road. (4) Rise from estuarine flats to consolidated Spearwood dunes. (5) Ridge line with shallow limestone, vegetated by stunted banksias.

Isolated patches of mangrove (Avicennia marina) occur at the southern end of the inlet and on the north-western shore, near the area known as Waterloo Head.

(4) Grazing Pasture

The eastern shore behind the line of the salt marsh consists mainly of cleared land sown with pasture grasses for cattle grazing (Plate 4). Formerly this land was mostly paperbark (Melaleuca raphiophylla) and acacia swamp (Acacia cyclops and A. rostellifera)

The soils of the salt marsh and much of the cleared pasture belong to the Vasse Association, described by Bettenay, McArthur and Hingston (1960). These are of estuarine origin (See Figure 8). The soils are very variable in constitution and as they are close to the water table, they are very moist throughout the year.

(5) Jarrah Woodland

The consolidated dune ridge above the pasture zone contains typical sandplain remnants of jarrah forest from the Darling Scarp, which is further to the east. This woodland consists primarily of jarrah (Eucalyptus marginata) and marri (E. calophylla), with scattered tuart (E. gomphocephala) on the western edge of the woodland (Plate 4).

The prominent understorey species include Banksia sp. and the related Persoonia sp. Hakea sp. and Xylomelum sp., together with peppermint (Agonis flexuosa), she-oak (Casuarina fraseriana) and Macrozamia in varying associations.

The jarrah woodland along the eastern margin occurs on yellow/grey siliceous sands of the Spearwood or Bassendean dune systems (Section 5.4 and Figure 8). The western face of the consolidated dune ridge overlies shallow limestone and scattered tuarts characteristically occur in such areas (Plate 5).

(6) Aquatic Vegetation

The major aquatic flora of the inlet consists of the seagrasses (Halophila ovalis and Ruppia maritima), together with species of marine algae including Chaetomorpha, Hormophysa, Gracilaria, Rhizoclonium and Cladophora (Allender 1968, Hodgkin and Smith 1971, Meagher 1971).

The filamentous algae form thick, loosely-attached mats in the extensive shallows of the inlet, (Plate 4), and are continually deposited as driftlines on the shores, forming beds of organic matter. Occasionally during early summer the algae proliferate to fill the entire water mass over the shallow sand flat areas of the inlet.

5.6 FAUNA OF THE LESCHENAULT INLET:

5.61 Terrestrial Fauna

The Tuart woodland of the western peninsula and the jarrah woodland of the eastern shore of the inlet contain mammals, birds and reptiles characteristic of the South-west. These Bassian (southern) species are typical of the whole South-west of Western Australia. The common native mammals are the grey kangaroo (Macropus fuliginosus), brush wallaby (M. irma) and the brush-tail possum (Trichosurus vulpecula).



Plate 5.

View across the Spearwood Dune ridge top. Estuary and western peninsula are shown in background. Tree species are :-

1. Banksia littoralis and thick under-story shrubs such as smoke bush, over shallow limestone.
2. Tuart - jarrah - red - gum over deeper sand on the ridge.

Introduced placental mammals (rabbits, foxes, cattle and sheep) are now prominent components of the mammal fauna.

The terrestrial bird fauna of Western Australia consists of a selection of species occurring in Eastern Australia, with very few endemic forms. These endemic species are closely related to other Australian forms. One exception is the Western Australian King Parrot (Purpuricephalus spurius) which is common in the Bunbury area.

The common large reptiles of the Leschenault region include the freshwater tortoise (Chelodina oblonga), Gould's goanna (Varanus gouldi), the bobtail skink (Trachysaurus rugosus) and the tiger snake and dugite.

5.62 Estuarine Birdlife

Lane, cited in Morrissy (1971), recorded 25 species of waterbirds in the inlet in December, 1970. He defined four distinct waterfowl habitats, as follows :-

(1) The Eastern Shore:

The shallows support waders, swans, pelicans, cormorants, white egrets and white-faced herons. Sand spits (such as Paris Road launch ramp) were observed to be important resting and feeding places for at least 11 species of waterfowl. (See Table 1).

(2) Head of the Inlet:

Lane observed four species of duck and several wading species on the black mud flats. Fresh water enters the inlet at this locality.

(3) The Western Shore:

This area is reported to support crested and caspian terns, white-faced herons, the white egret, pelicans and swans. Observation during December, 1971, revealed that the composition of the waterfowl population present was

TABLE 1.
WATERBIRDS OBSERVED IN LESCHENAULT INLET BY LANE in 1970 (INDICATED THUS *)
AND DURING THE PRESENT SURVEY (INDICATED THUS +)

<u>SPECIES</u>		<u>EAST</u> <u>SHORE</u>	<u>HEAD</u> <u>OF</u> <u>INLET</u>	<u>WEST</u> <u>SHORE</u>	<u>COLLIE</u> <u>RIVER</u> <u>DELTA</u>
Australian Pelican	<u>Pelecanus conspicillatus</u>	* +		* +	* +
Darter	<u>Anhinga rufa</u>				* +
Black Cormorant	<u>Phalacrocorax carbo</u>	+			* +
Pied Cormorant	<u>Phalacrocorax varius</u>	+		+	* +
Little Pied Cormorant	<u>Phalacrocorax melanoleucos</u>	+			* +
White-faced Heron	<u>Ardea novaehollandiae</u>	+		* +	* +
White Egret	<u>Egretta alba</u>	* +		* +	*
Nankeen Night Heron	<u>Nycticorax caledonicus</u>	+			
Black Swan	<u>Cygnus atratus</u>	* +	*	* +	* +
Mountain Duck	<u>Tadorna tadornoides</u>	*	*		
Black Duck	<u>Anas superciliosa</u>	+	*	+	
Grey Teal	<u>Anas gibberifrons</u>		*		
Wood Duck	<u>Chenonetta jubata</u>		*		
Red-capped Dotterel	<u>Charadrius alexandrinus</u>	+			

<u>SPECIES</u>		<u>EAST</u> <u>SHORE</u>	<u>HEAD</u> <u>OF</u> <u>INLET</u>	<u>WEST</u> <u>SHORE</u>	<u>COLLIE</u> <u>RIVER</u> <u>DELTA</u>
Mongolian Dotterel	<u>Charadrius mongolus</u>		+		
Grey Plover	<u>Pluvialis squatarola</u>	*	+		*
Greenshank	<u>Tringa nebularia</u>	*	+		* +
Little Stint	<u>Calidris ruficollis</u>				*
Bar-tailed Godwit	<u>Limosa lapponica</u>	*	+		* +
White-headed Stilt	<u>Himantopus himantopus</u>				* +
Red-necked Avocet	<u>Recurvirostra novaehollandiae</u>		+		*
Silver Gull	<u>Larus novaehollandiae</u>	*	+	+	* +
Caspian Tern	<u>Hydroprogne caspia</u>		+	* +	* +
Crested Tern	<u>Sterna bergii</u>		+	* +	* +

similar to that of the eastern shore.

The La Porte effluent pipe provided an important roosting place for cormorants during the day - approximately 300 lesser pied cormorants were observed there during the present study.

(4) Collie River Delta:

The sandflats at the mouth of the Collie River provided a resting area for cormorants, pelicans and swans, and a feeding area for wading birds (See Table 1). The marsh near the Preston River mouth has a similar function and also supports small numbers of ducks.

5.63 Aquatic Fauna

The shallow mud and sandflats of the inlet support large numbers of benthic animals, including small molluscs (both snails and bivalves), several species of polychaete worms and amphipod crustaceans. Qualitative sampling during the present survey revealed that higher numbers of animals occur in the western black mudflats than in the sandy shallows on the eastern shore.

Hodgkin and Smith (1971) state that the benthos is more diverse and probably more abundant than in either the Peel Inlet or the Swan Estuary. Meagher (pers. comm) noted that the worm population of the eastern shore of the inlet was approximately 140 times greater than similar locations in Cockburn Sound. Hodgkin and Smith (loc. cit) also note that zooplankton is abundant in Leschenault Inlet.

Ectocarpus sp. was epiphytic on benthic algae (e.g. Hormophysa triquetra) and the seagrasses Halophila ovalis and Ruppia maritima.) These species could be expected to play some role in stabilising the substrate by binding sand. A thick brown coating of diatoms (mainly Melosira spp) and fine sediment enveloped all benthic flora. Any movement of the adjacent water caused suspension of this material so that the water became turbid. Meagher (1971) found that the algae and associated epiphytes gave rise to wide fluctuations in oxygen content of the water, from super-saturation in the afternoon to depletion in the early hours of the morning.

(2) Salt Marshes :

The extensive shallows are fringed by a band of rushes (Juncus maritimus) with an occasional swamp she-oak (Casuarina obesa) (Plate 3). Other species growing in the salt marsh are the samphires, Salicornia sp., Arthrocnemum sp., berry salt bush, Rhagodia baccata, and pigface, Carpobrotus aequilaterus.

(3) Paper Bark Swamp :

A line of paperbarks (Melaleuca raphiophylla) and peppermints (Agonis flexuosa), with an understorey of rushes (Juncus maritima) and wattles (Acacia cyclops), commences about fifty yards from the shore. Patches of open water were often present amongst the paper barks. Pastures have been cleared from the area originally consisting of paper bark swamp to the rising ground fronting the stabilised sand dune ridge.

The Old Coast Road runs through the pasture dividing the area into a western and an eastern pasture (Plate 4).

Western Pasture :

Introduced pasture grasses and couch grass (Cynodon dactylon), clumps of rushes, blue lupins, bracken fern (Pteridium esculentum) and pigface (Carpobrotus aequilaterus) form the flora of this severely disturbed area. Swampy patches occur in strips parallel to the inlet shore.

Road Verge :

The Old Coast Road is bordered by large paper barks (Melaleuca raphiophylla) to 30 feet, and peppermints (Agonis flexuosa) with a dense understorey of wattles (Acacia cyclops and Acacia cyanophylla), and exotics such as bracken fern (Pteridium esculentum) and weeds (Plate 4).

Eastern Pasture :

The eastern pasture has kikuyu grass (Pennisetum clandestinum) replacing the couch grass of the western pasture in the swampy strips and a small sword-sedge (Lepidosperma gladiatum) swamp in the north eastern corner. Pasture plants naturalised from the nearby farmhouse garden include wild peppermint and arum lilies.

An avenue of large (60 feet) silver poplars traverses the pasture to a derelict farmhouse surrounded by large oleanders and pepper trees.

Slope:

On the steep slope bordering the pasture (Plate 9), the vegetation has been virtually untouched. Toward the southern portion of the block, the slope is clothed with dense woodland the principle species being peppermint (Agonis flexuosa), banksia (Banksia littoralis), red gum or marri (Eucalyptus calophylla), small jarrah (E. marginata) and towards the top of the ridge in shallower sand overlying limestone, tuart (Eucalyptus gomphocephala) (Plate 5).

Understorey plants include escaped pasture grasses and herbs and native shrubs such as zamia palm (Macrozamia reidlii), smokebush (Conospermum triplenerium), native primrose (Hibbertia montana), Jacksonia furcellata, J. spinosa, Conostylis candicans.

On the highest part of the ridge on the southern half of the block the larger trees give way to a wedge of small (10 - 30') banksias (B. littoralis) in an open woodland formation with a thick cover of small shrubs, including such species as Hibbertia hypericoides, Leschenaultia expansa, Melaleuca acerosa, Glishnocaryon aurea and various brightly flowered herbs.

Jarrah Woodland :

On the leeward side of the consolidated dune ridge there is a gentle downward grade, then a second, less pronounced ridge line. (Figure 10).



Plate 9.

View of swampy eastern pasture and the rise. Tree species shown are :-

- (1) Peppermint in flower, (Agonis flexuosa)
- (2) Banksia in flower, (Banksia littoralis)
- (3) Tuart, (Eucalyptus gomphocephala)

The tree species associated with jarrah and the density of the forest formation change according to soil depth and microtopography. There are no sharp boundaries between the associations, but rather a series of gradations from one association into the next.

Examination of aerial mosaics and field observation showed a change in soil colour approximately half way along the block. A change in the tree species associated with jarrah was noted to correspond to the change from yellow Spearwood sands to leached white-grey Bassendean sands.

The vegetation on the yellow sands overlying shallow limestone, was characteristically tuart (Eucalyptus gomphocephala) and scattered marri (E. calophylla), with jarrah (E. marginata) becoming dominant only in the transition between Spearwood and Bassendean dune systems. The understorey species include Banksia grandis and Casuarina fraseriana, with a ground cover of peas, murtles and other woody perennials.

McArthur and Bettenay (1960) noted that the siliceous grey sand of the Bassendean dune system was characteristically vegetated with jarrah in association with Banksia attenuata, she-oak (Casuarina fraseriana) and woody pear (Xylomelum occidentale). In swampy areas such as the fenced triangle at the back of the block the main vegetation is scattered paper barks (Melaleuca parviflora) and christmas trees (Nuytsia floribunda).

A change in storey structure occurs as the jarrah woodland becomes thicker and more forest-like. Shrubs are taller (4 - 10') and the bush almost impenetrable on the leeseide of the ridge. The shrubs become evenly smaller in the exclusively jarrah-marri woodland to a layer less than 2 foot high (Plate 10). This woodland is easily penetrated due to the almost total absence of a tall (4 - 10') shrub layer.

Table 3 indicates the species recorded in the jarrah association, during the present study.



Plate 10.

Jarrah woodland towards the back of the block. The main tree species are jarrah, marri and banksia. The low shrub under-story gives the woodland an open appearance.

- (1) = Jarrah
- (2) = Banksia

TABLE 3.
UNDERSTOREY SPECIES RECORDED ON UDC DEVELOPMENT SITE IN
THE JARRAH ASSOCIATION (DECEMBER, 1971)

TALL SHRUBS AND
SMALL TREES

Banksia littoralis
B. grandis
Xylomelum occidentale
Kunzea ericifolia
Jacksonia spinosa
Agonis flexuosa
Nuytsia floribunda
Melaleuca parviflora
Hakea sp.
Daviesia sp.
Persoonia longifolia

SMALL SHRUBS
1 - 3 FEET

Synaphea polymorpha
Petrophile linearis
Lasiopetalum floribundum
Hemiandra pungens
Phyllanthus calycina
Comesperma virgatum
Tetratheca hirsuta
Glishnocaryon aurea
Pimelia rosea
Persoonia saccata
Hibbertia hypericoides
Leschenaultia expansa

HERBS AND SCRAMBLERS

Thysanotus sp.
Kennedya prostrata
Clematis atistata
Lobelia tenuior
Ptilotus sp.
Stylidium spp.
Hybanthus calycinus
Conostylis candicans
Dampiera striata
Dasyogon hookeri
Stypandra grandiflora
Senecio lautus
Patersonia sp.

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Western Australian Planning Commission Act, 1985

Greater Bunbury Region Scheme Submission Form

To: The Secretary
Western Australian Planning Commission
61 Victoria Street
Bunbury WA 6230

OFFICE USE ONLY		
SUBMISSION NUMBER	PROPOSAL NUMBER	REFER EPA
235		

I/We SOUTH WEST ENVIRONMENT CENTRE (Please print clearly)
(NAME)

of 101 Victoria Street Bunbury Postcode 6230
P.O. Box 693 (ADDRESS)

make a submission in relation to the Greater Bunbury Region Scheme. The submission is as follows:

See attached typescript

MINISTRY FOR PLANNING BUNBURY OFFICE	
16 FEB 2001	
FILE	

(Please attach additional plain sheets if necessary. Any attachments should be loose. Do not bind)

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

- 7.1 The proposal to establish a rail link from Kemerton to Bunbury (Figure 4 GBRS Environmental Review) is welcomed by SWEC, as this would lead to decreased heavy haulage traffic on our roads.
- 7.2 As the Kemerton Industrial Park has no facilities for storage of hazardous waste, should a train derailment occur, what guarantees are there that goods being transported by this rail system are safe, and not likely to cause an environmental catastrophe?

8 PROPOSED PORT NEAR BUFFALO ROAD

- 8.1. On the GBRS map, it clearly shows an area of land coloured light green at the northern end of the Leschenault Estuary, while the surrounding land is coloured dark green as being included in the proposed ROS. It brings into question why this land has been left and re-establishes the notion that in the future a port at the northern end of the estuary might become a reality.
- 8.2 SWEC strongly opposes another Port being constructed in this area and believes any discussions pertaining to this proposal should have full community input and proper consultation.
- 8.3 The Kemerton Port is not simply intended to be just a port. Heavy industry is planned to be located on land backing the port. Industry that is suggested is heavy industry of a hazardous or dirty nature – industry that would be refused at Bunbury because of risk and nuisance to the community.
- 8.4 A feasibility study into the proposed port was commissioned by the Department of Resources Development and completed in May 1995. Three options for a port were examined:
1. a 4km offshore jetty
 2. a sheltered harbour constructed on the shore
 3. and inland harbour. The third and most expensive (\$350 million) option of an inland harbour is favoured at this stage.
- 5 The third option calls for the dredging of 4km of seabed to create a navigational approach channel. This will result in the destruction of the seabed and burial of considerable areas of seabed and beach where the port is constructed.
- 6 If sea conditions do not allow cutter suction dredging, it may be necessary to blast the approach channel prior to excavation. This may cause short term loss of fish stocks.
- 7 Breakwaters will need to be constructed to protect the channel. The breakwaters will interrupt littoral drift and cause beaches to the north (Binningup and Myalup) to be starved of sand. It could also lead to coastal instability. A sand-bypassing system and beach protection measures will need to be developed which the report anticipates will add significantly to the capital and annual operating cost of the port.

All foreseeable cargo demands in the South West region, except those of a hazardous nature, can be met by the Port of Bunbury (located 14 kms south), which has a strategic plan to meet these demands and which is not being utilized to even a quarter of its capacity at present.

8.9 The port and associated industrial areas are to be located just 370 metres north of the Leschenault Estuary within the System 6 Conservation Reserve. This area is of high conservation value. In 1992 the EPA stated that the area was "much too valuable to be destroyed" and recommended that it be maintained and managed as a water bird habitat.

9 VEGETATION LINKS BETWEEN KEMERTON AND LESCHENAULT PENINSULA PARK

9.1 Currently there are no vegetation links between the Leschenault Peninsula and the Kemerton Industrial Park. As part of the ROS concept and in the interest of maintaining vegetation links for wildlife corridors, SWEC recommends that the GBRS take this issue into consideration. *

9.2 As the Perth Bush plan recommends that vegetation links for wildlife corridors are of great importance as these vegetation links are rapidly declining.

10. VEGETATION LINK BETWEEN PRESTON RIVER AND JARRAH FOREST

10.1 Regional park to near Dardanup/Boyanup

10.2 Only east west linkages of remnant vegetation provide for the natural variety of landforms and vegetation communities in the western Swan Coastal Plain.

10.3 Special efforts must be made to create such east west linkages wherever opportunities exist for the sake of ecological sustainability.

11. PLANNING ADJACENT TO BORDERS OF REGION SCHEME

11.1 SWEC is concerned that the good planning within this region scheme may be partly undone unless important areas just outside the boundaries of this scheme are protected. For example, water in the GBRS area comes from several catchments outside the GBRS area, and the whole of the catchments need careful planning and protection.

11.2 Similarly, ecosystems such as Jarrah/Marri or Tuart/Peppermint forests do not coincide with GBRS boundaries, and therefore in the interests of preserving biodiversity, the whole of those ecosystems must be considered in some integrated way.

11.3 SWEC submits that if the GBRS cannot do this, then some other planning mechanism be found to do so.

12. LUDLOW TUART FOREST

12.1 No management plan has still been developed for Ludlow Tuart Forest, despite its designation as a tourist attraction and focus for a "tourist drive". It has been poorly managed to date, through clearing, plantations of exotic trees, untreated weed infestations and long leases for stock grazing. SWEC is aware that there is a range of quality from isolated trees to reasonable quality forest.

12.2 Cable Sands is currently proposing to mine for mineral sands in part of the Ludlow Tuart area, and is consulting with the community.

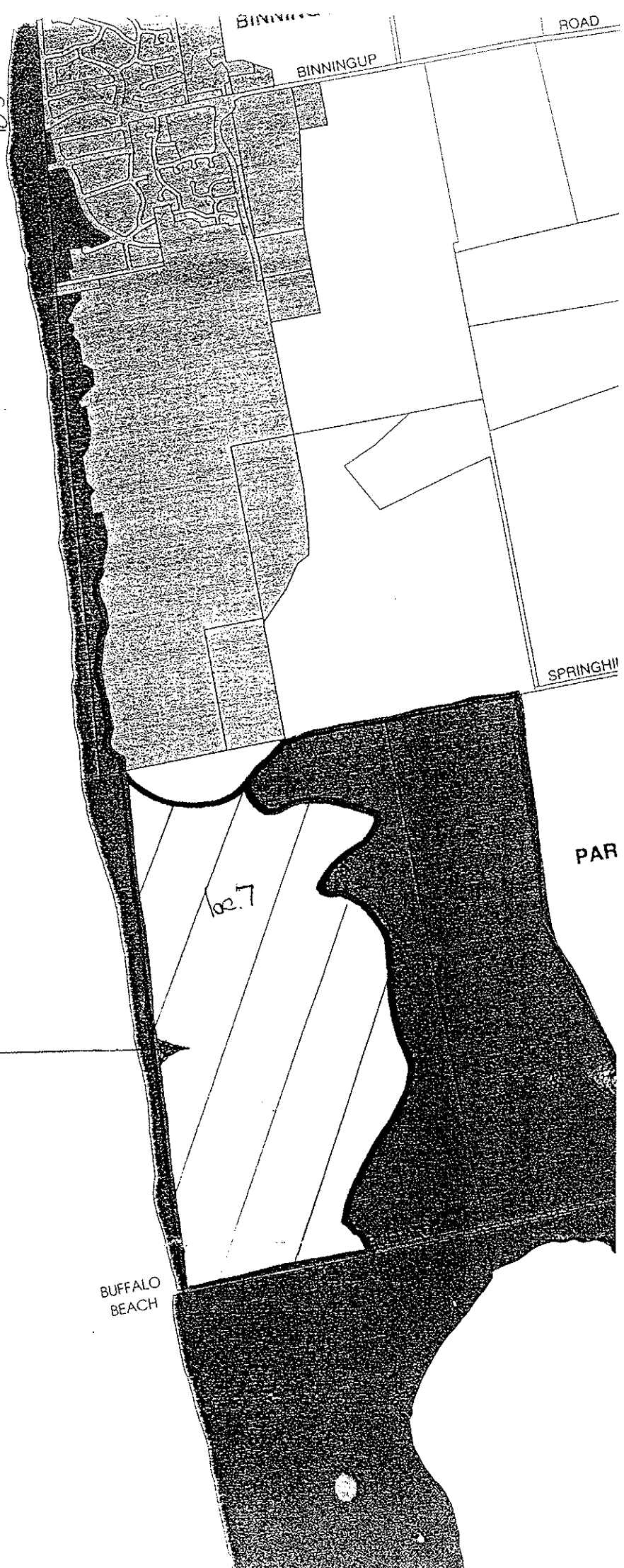
GREATER BUNBURY REGION SCHEME

Following is the submission of Christopher M Bishop in relation to the GREATER BUNBURY REGION SCHEME (2000);

ISSUE	COMMENT	QUESTION/RECOMMEND
Leschenault loc 7- between Buffalo Rd and Binningup	a large parcel of land that is zoned rural. Steep unstable primary dune incorporating good quality Tuart woodland. It is a natural Regional Open Space extension of Leschenault Peninsula conservation area. Low lying part of this land and a more easterly location (loc 14), which are of lower conservation value were recently purchased by WAPC as Regional Open Space. Previously touted as a port for Kemerton, but subsequently rejected for this purpose by government- this scheme leaves the Port option disturbingly open* ¹	Why is this land partially or completely not Public Open Space? Is rural land use a realistic present or future zone designation? Recommend that a small portion immediately south of the Binningup urban zone be kept rural (with potential for urban deferred/urban) with majority of land parcel made Regional Open Space.
Cokelup Swamp environs - Cokelup Rd, Gelorup	large regionally important wetland under development pressure from southerly expansion of Gelorup. Wetland proper (which is Swan Coastal Plain Lakes EPP) and heath to the south and dryland sand ridge to the east provides natural and visually attractive "buffer" between urban Gelorup and rural landscape., and complements Capel Golf Course reserve on opposite site of Bussell Hwy.* ²	WAPC purchase as ROS and reflect in Region Scheme.
Treendale subdivision	urban subdivision outside the Australind bypass that set a poor planning precedent- that now has to	why is ROS along Collie River and associated with this subdivision not continuous?

* loc.7 also part of System 6 "CGS"
+ protection of this area has CALM support.
(see attached plan)
*² see attached plan

MAP 9 - REGIONAL SCHEME MAPS



RECOMMENDED
ADDITION
TO R.O.S.



Western Australian Planning Commission Act, 1985
Greater Bunbury Region Scheme
Submission Form

To: The Secretary
Western Australian Planning Commission
61 Victoria Street
Bunbury WA 6230

OFFICE USE ONLY		
SUBMISSION NUMBER	PROPOSAL NUMBER	REFER EPA
193		

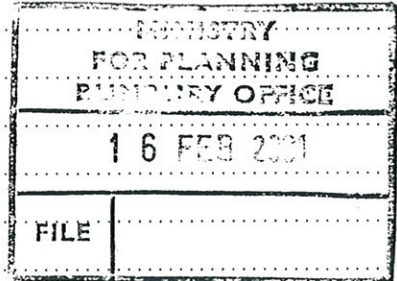
I/We TURNER MASTER PLANNERS AUSTRALIA (Please print clearly)
(NAME)

of PO BOX 430, VICTORIA PARK Postcode 6979
(ADDRESS)

on behalf of Coonawarra Nominees Pty Ltd
make a submission in relation to the Greater Bunbury Region Scheme. The submission is as follows:

In respect to lot 7 Buffalo Road, Australind
As Attached.

This is an addition to Submission 193



(Please attach additional plain sheets if necessary. Any attachments should be loose. Do not bind)

Sketch 489

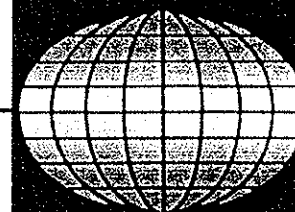
Where the submission relates to a specific parcel of land, please indicate:

Lot number 7 Street address Buffalo Road

Locality (suburb) Australind / Binningup

My interest is (please circle) owner/occupier, registered proprietor, lessee, mortgagor, other. Consultant for the owner.

Please turn over to complete your submission



**TURNER MASTER
PLANNERS AUSTRALIA**

15 January 2001

Larry Guise,
Regional Manager
Ministry for Planning,
6th floor,
61 Victoria Street,
Bunbury 6230

Dear Sir,

PO Box 430, Victoria Park
Western Australia 6979
Tel: (+61 8) 9472 6606
Fax: (+61 8) 9472 5731
turnermp@q-net.net.au

GREATER BUNBURY REGION SCHEME - SUBMISSION LOT 7 BUFFALO ROAD, AUSTRALIND/BINNINGUP

We lodge this submission on behalf of Coonawarra Nominees Pty Ltd, the owners of Lot 7 Buffalo Road, Australind.

Further to our letter of 21 December 2000 (incorrectly dated November) and your reply received on 29 December 2000, we thank you for your willingness to discuss and try to resolve this matter. We have explored the DEP's position on the extent of environmental work required to support "urban deferred" zoning but found their requirements to be excessive for zoning at a regional level and skewed towards the foreshore and wetlands which are already proposed as regional open space under the proposed scheme.

Accordingly, we confirm our previous submission that part Lot 7 Buffalo Road should be included in the "Urban Deferred" zone rather than the "Rural" zone in the proposed Greater Bunbury Region Scheme.

It is clear to us that this has been an error of omission by the WAPC in the preparation of the Greater Bunbury Region Scheme. As a consequence, the owner of Lot 7 will suffer loss of value of the property due to the WAPC's actions, UNLESS the proposed zoning of this land is changed from "rural" to "urban deferred". The basis of this is explained in our submission.

1. ZONING CRITERIA

You advised of criteria for the inclusion of land in the "urban deferred" zone as:

- Land has been identified for future urban development in a regional structure plan (e.g. Greater Bunbury Structure Plan).
- District structure plan has been prepared and adopted for the area.
- Land will be required for urban purposes within the next ten years.
- Land has no major environmental constraints.

- Service infrastructure and community facilities could be readily extended to the area.

We submit that not all these criteria for "urban deferred" zoning are appropriate.

We understand the WAPC "Perth" office which prepared the draft scheme supplied these criteria, however the WAPC Bunbury office is responsible for these submissions. This should facilitate your objective review of these matters.

Additional advice you supplied for Lot 7 (South Binningup area) not being included in the "urban deferred" zone and the draft scheme was that when applied to the criteria, Lot 7 was deficient in the following respects:

- No district structure plan has been prepared and adopted for the area.
- Land will not be required for urban purposes within the next ten years.
- Land has major environmental constraints as it is within a system six area.

Lot 7 complies with the planning criteria as the Greater Bunbury Structure Plan incorporates future urban for this land and district structure planning is provided by The Coastal and Lake Lands Planning Strategy (1999). Future land requirements have been dealt with above. Detailed environmental constraints and community facilities are matters that should be dealt with at a development level and are not appropriate reasons to deny zoning at a regional context.

The Region Scheme must look beyond a 10 year horizon for future urban land requirements. For example, the Scheme has adopted a 50 year strategy for the nearby Kemerton Industrial Park and in the Metropolitan area "urban deferred" zoning earmarks land for development for a 20 to 30 year timeframe.

Your criterion of "no major environmental constraints" is also unsound. The preparation of a scheme must address all land and future planning issues and respond to the applicable constraints in an appropriate manner and then examine any environmental issues in an Environmental Review. The Scheme addresses the major environmental issues affecting Lot 7 (the foreshore and wetlands) by their Reservation as Regional Open Space, but fails to address the balance of the site where the environmental issues are minor/local or are management issues normally satisfied at a local zoning and development stage. Furthermore, the "accepted approach" to the zoning of such land elsewhere by the WAPC has been "urban deferred" zoning rather than "urban" zoning in recognition of the ability of the planning process to require detailed environmental review of local issues and management of the environment associated with local rezoning, subdivision and development.

The WAPC's omission to specifically include the land (earmarked as "future urban" in the Bunbury – Wellington Region Plan) as "urban deferred" in the draft scheme resulted in the WAPC's Environmental Review failing to specifically

address the environment of Lot 7. The environmental research now likely to be required by the EPA should not be imposed on the owner and nor should it be used as an excuse for the WAPC failing to support this submission on its merits.

In making this submission we believe it also necessary to reiterate some of the matters discussed at our meeting and subsequent correspondence. These matters provide the context for our submission and indicate some of our concerns with the WAPC's approach to the Scheme and in particular the zoning and environmental issues.

2. PREPARATION OF THE GREATER BUNBURY REGION SCHEME

The preparation of the scheme is provided for under the Western Australian Planning Commission Act 1985 as amended in 1995. Once the Commission decides to prepare such a scheme it is obliged to effectively plan and coordinate land use and land development for all land within the scheme area.

The scheme report states:

"The Region Scheme, being a statutory planning document, will provide the mechanisms to effectively implement regional plans such as the Bunbury -- Wellington Region Plan (WAPC, 1995)."

And in Clause 5.2 of the Scheme Report:

"The final Bunbury -- Wellington Region Plan, which also incorporated the Greater Bunbury Structure Plan, was released by the WAPC in November 1995 for the City of Bunbury and the Shires of Harvey, Collie, Dardanup, Donnybrook - - Balingup and Capel. The final plan was the outcome of a process, which included the release of the draft plan in 1993, and the receipt and assessment of public submissions. The draft Scheme Map generally reflects the land use proposals contained in the Region Plan, in particular most of the future urban, regional open space and major road proposals of the Greater Bunbury Structure Plan."

Subsequently, in Clause 5.7 of the Scheme Report it is stated that the Bunbury -- Wellington Region Plan is incorporated into the scheme by reference, although the scheme make it clear that in the case of any inconsistency between the scheme and reference documents, the scheme prevails. Thus, once the scheme is approved the Rural zoning of the scheme overrides the "future urban" classification of the Bunbury -- Wellington Region Plan for Lot 7.

Although Lot 7 was indicated as "future urban" and regional open space in the Bunbury -- Wellington Region Plan it has been included in the "rural" zone and Regional Open Space under the scheme. This is clearly a major departure from the stated intent of the scheme and the basis for this must be questioned.

It is our submission that the WAPC failed in its responsibility to consider the merits of the proper and orderly planning of Lot 7 in the preparation of the scheme. We submit that the WAPC was required by the Act, by proper planning process and its stated objectives in the preparation of the scheme, to have carried the "future urban" classification of the land into the draft scheme as "urban deferred" zone. It is incumbent on the WAPC to prepare the draft scheme and then submit it to the EPA for assessment and instructions without "leaving bits out". That it failed to include "urban deferred" zoning of Lot 7 meant that the land earmarked as "future urban" was not necessarily included in the WAPC's Environmental Review and the EPA's assessment.

On the other hand, we note that the regional open space proposals were carried through into the draft scheme from the Bunbury -- Wellington Region Plan. These regional open space proposals contain the most significant environmental features of Lot 7 and apparently there had been sufficient information and investigation to support such reservations in the scheme, but not "urban deferred" for the balance land not affected by these significant environmental features. This smacks of inconsistency and promotion of some interests above others.

For the record, please note that we do not agree with the definition of the boundaries of the regional open space shown in the scheme as the ROS includes the land owner's accommodation building, sheds, cattle yards and the entry roadway. You confirmed in discussions that these boundaries were preliminary and subject to detailed definition at a later time whereby the ROS could be increased or decreased subject to "ground truthing" of boundaries.

We do not believe the reservation for ROS and the omission of "urban deferred" zoning in respect of Lot 7 is correct, both at law, or in accordance with proper planning practice having regard to the stated intention of the scheme. Consequentially, we believe it can be demonstrated that the WAPC's error of omission led to the land (previously identified as "future urban") reverting to "rural" under the draft scheme which will adversely affect the value of the land and, as a result, the valuation of any compensation relating to the regional open space.

3. ZONING

Urban Deferred or 'future urban' classification was shown for this land in the Bunbury Region Plan (1983), Bunbury -- Wellington Region Plan (1995) and the Coastal and Lakelands Planning Strategy (1999). It is an anomaly that the property is not included in the Urban Deferred zone in the Bunbury Region Scheme. We note your assurance that this was not as a result of the Kemerton port proposals for the subject land.

Consider also the definition of "urban deferred" in the proposed scheme:

"Urban Deferred means areas identified for future uses following the extension of services, the progressive development of adjacent urban areas and resolution of any environmental and planning requirements relating to the development of the land."

Thus the scheme contemplates that urban services and environmental matters relating to development will be dealt with after "urban deferred" zoning.... not before!

Whilst the "urban deferred" zoning of Lot 7 has not been included in the proposed Scheme, we note that the two major environmental features of the land (ie, the foreshore and the eastern wetlands) are proposed to be reserved as Regional Open Space. This is inconsistent and arbitrary and would result in a detrimental affect on the value of the subject land.

4. PLANNING AND ENVIRONMENTAL RESEARCH

The owners have no site specific detailed documentation on the site and are unable to initiate environmental studies because of the cost and time expected before development. In any case, this should not be required for "urban deferred" zoning. Further, there is adequate structure planning for regional zoning decisions and it is our submission that the WAPC, as the proponent, was responsible for the Environmental Review of the draft scheme and these investigations.

We have obtained preliminary advice from the DEP concerning the extent of additional environmental study required to satisfy the EPA and believe that those requirements are excessive and unreasonable for a regional zoning of this nature particularly where the major environmental features (ie, the foreshore and wetlands) are already proposed to be reserved under the scheme. Furthermore, the DEP advice requesting additional advertising of such a proposal is unnecessary because of the numerous occasions the future urban classification of this land has been advertised and the public has had opportunities for submissions in the past.

At this time there is no particular proposal or plan for the ultimate use and development of the land. We submit that additional planning beyond the district level planning in the Coastal and Lakelands Planning Strategy (refer to structure plan therein) is not required for zoning purposes in the region scheme.

Because the land would remain "General Farming" zone under the Shire of Harvey Town Planning Scheme we would expect detailed environmental investigations and assessment as well as appropriate planning would be necessary for the site at the time we seek residential rezoning under that Scheme. Thus, although we are contemplating Urban Deferred zoning in the

Region Scheme, the need for Local Authority zoning and the subsequent subdivision and development processes provide ample opportunity for environmental and planning research to be conducted relative to a particular proposal for the land. This is provided for in the Environment Protection Act and is also contemplated in the definition of "Urban Deferred" within the Region Scheme Text. We also note that unlike other zones within the proposed scheme, (such as urban) there is no compulsion on the Local Authority to amend it's scheme from "General Farming" zone for "urban deferred" zones. That is, until the land is transferred to the "urban" zone. Such a change from "urban deferred" would trigger the local site environmental review and assessment.

Finally, in regard to any additional environmental research and advertising of the proposal for "urban deferred" on Lot 7 land previously earmarked as "future urban", we submit that the WAPC should consider this matter on it's merits and include the land in the scheme as a result of this submission. It should not "second-guess" the EPA's decision on this submission, but rather, consider the merits of the case. Should the EPA validly require re-advertising as part of its and the Minister's advice and conditions, then the WAPC should simply readvertise the draft scheme. The WAPC must not make decisions based upon a presumption as to what the EPA and Minister may or may not require.

5. TIMING OF DEVELOPMENT

Whilst we note the Ministry's comments that the land is unlikely to be required for urban development within ten years, we believe the intention of the Region Scheme is to indicate future urban land such as this as Urban Deferred zone. Because of the possible ten-year time span to urban development and lack of a specific development proposal the owners deem it unreasonable and onerous and are reluctant to commit funds to detail planning and environmental work at this time. Development patterns and trends may change within the ten-year period so that such work may be superseded in any case.

We also advise that we will seek to present this submission at a hearing. Please find attached a copy of the completed Submission Form.

Yours faithfully,



EDWARD TURNER

cc. D Lombardo

CONTACT DR N. GIBSON CALM WOODVALE for further information.

Flora list for C66 (extracted from Swan Coastal Plain database, Lesh sites 1 - 6 2/1995).

Department of Environmental Protection System 6 Update: Site Based Flora List C66 Leschenault Inlet

(extracted from the CALM Swan Coastal Plain database, 106 taxa, Lesh sites 1-6, 2/95)

Anthericaceae

- Thysanotus manglesianus
- Thysanotus sp. manglesianus/patersonii scps
- Tricoryne elatior

Apiaceae

- Apium prostratum
- Centella asiatica
- Centella cordifolia
- Daucus glochidiatus
- Hydrocotyle alata
- Hydrocotyle hispidula
- Hydrocotyle pilifera var. glabrata
- Hydrocotyle sp. scps
- Hydrocotyle tetragonocarpa
- Trachymene coerulea
- Trachymene pilosa

Apocynaceae

- Alyxia buxifolia

Araceae

- * Zantedeschia aethiopica

Asphodelaceae

- * Trachyandra divaricata

Asteraceae

- * Cirsium vulgare
- Lagenifera huegelii
- Milotia tenuifolia
- Olearia axillaris
- Senecio lautus subsp. dissectifolius
- Senecio lautus subsp. maritimus
- * Sonchus oleraceus
- Waitzia citrina

Brassicaceae

- * Heliophila pusilla

Caryophyllaceae

- * Cerastium glomeratum
- * Stellaria media

Chenopodiaceae

- Atriplex cinerea
- Rhagodia baccata subsp. baccata

Convolvulaceae

- Dichondra repens

Crassulaceae

- Crassula colorata

CONTACT DR N. GIBSON CALM WOODVALE for further information.

Flora list for C66 (extracted from Swan Coastal Plain database, Lesch sites 1 - 6 2/1995).

- * *Crassula decumbens*

Cuscutaceae

- * *Cuscuta epithymum*

Cyperaceae

- Carex preissii*
- * *Isolepis marginata*
- Lepidosperma angustatum*
- Lepidosperma gladiatum*
- Lepidosperma longitudinale*

Dasyopogonaceae

- Acanthocarpus preissii*

Dilleniaceae

- Hibbertia cuneiformis*

Epacridaceae

- Leucopogon parviflorus*

Euphorbiaceae

- Phyllanthus calycinus*
- Poranthera microphylla*

Geraniaceae

- * *Erodium botrys*
- * *Geranium molle*
- Geranium retrorsum*

Haemodoraceae

- Conostylis aculeata*

Juncaceae

- Juncus kraussii*

Juncaginaceae

- Triglochin* sp. A FPR (BJK&NG 095)
- Triglochin trichophorum*

Lamiaceae

- Hemiandra pungens*

Lauraceae

- Cassytha racemosa*

Lobeliaceae

- Lobelia alata*
- Lobelia tenuior*

Mimosaceae

- Acacia rostellifera*
- Acacia* sp. scps

Myoporaceae

- Myoporum caprarioides*

CONTACT DR N. GIBSON CALM WOODVALE for further information.

Flora list for C66 (extracted from Swan Coastal Plain database, Lesch sites 1 - 6 2/1995).

Myrtaceae

Agonis flexuosa
Eucalyptus gomphocephala
Melaleuca raphiophylla

Orchidaceae

Caladenia latifolia
Cyrstostylis sp. scps
Eriochilus dilatatus
Pterostylis aff. nana scps
Pterostylis brevisepala ms sthest

Orobanchaceae

* Orobanche minor

Oxalidaceae

Oxalis corniculata
Oxalis perennans

Papilionaceae

Hardenbergia comptoniana
* Melilotus indicus
Templetonia retusa
* Trifolium sp. scps

Poaceae

Agrostis avenacea
* Aira caryophyllea
* Bromus diandrus
Cynodon dactylon
* Ehrharta longiflora
* Lagurus ovatus
* Lolium perenne
Microlaena stipoides
* Stenotaphrum secundatum
Stipa elegantissima
Stipa flavescens
* Vulpia bromoides
* Vulpia myuros

Portulacaceae

Calandrinia brevipedata

Primulaceae

* Anagallis arvensis
Samolus repens

Proteaceae

Hakea prostrata

Ranunculaceae

Clematis microphylla
Clematis pubescens
Clematis sp. scps
Ranunculus colonorum
Ranunculus pumilio

CONTACT DR N. GIBSON CALM WOODVALE for further information.

Flora list for C66 (extracted from Swan Coastal Plain database, Lesch sites 1 - 6 2/1995).

Rhamnaceae

Spyridium globulosum

Rubiaceae

* Galium murale

Rutaceae

Diplolaena dampieri

Santalaceae

Santalum acuminatum

Scrophulariaceae

* Dischisma arenarium

Veronica aff. calycina Alkimos scps (BJK&NG 235)

Stackhousiaceae

Stackhousia monogyna

Sterculiaceae

Guichenotia ledifolia

Thomasia purpurea

Urticaceae

Parietaria debilis

Zamiaceae

Macrozamia riedlei

ENTERED ON GIS

Name: Leschenault Inlet – Biological Data
Date: 28/04/2006
Capture Author: Thomas Leong

Comments:

Polygon

Created to match documented study area with acceptable level of accuracy

Accuracy Levels:

- High = Document contained visual and or described spatial references easily copied, resulting in little or no polygon boundary errors
- Acceptable = Document contained visual references with complex boundaries, resulting in minor boundary errors
- Low = Document contained little or no visual references, resulting in polygon boundary errors

Attributes

Report Info – Captured without problems
Custodial/Contact – Captured without problems
Content – Captured without problems

from: M.E. Trudgen 1984
 Flora & Vegetation of the Leschenault
 Peninsula
 Syst 6 library Cbb. 1
 18/4/95

VEGETATION OF THE LESCHENAULT PENINSULA

Key

Yoongarillup Plain

Inlet Edge

- A *Samphires* Closed Sedgelands, Closed Herblands and Low Open Heath
- 17 = B *Melaleuca raphiophylla* Low Open Forest to Closed Forest and *Melaleuca cuticularis* Low Open Forest
- B1 *Avicennia marina* Closed Scrub

Drier Parts of Plain

- Eucalyptus gomphocephala* (Tuart) Woodland
- Acacia cochlearis*, *Acacia rostellifera* Closed Scrub

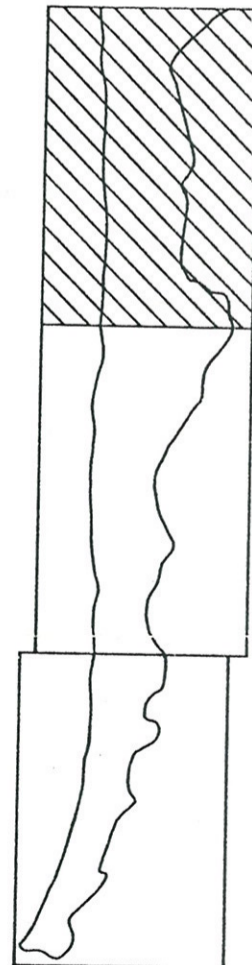
Quindalup Sand Dunes and Plains

- 306 = C *Agonis flexuosa* Woodland Low Open Forest to Low Closed Forest
- Agonis flexuosa* with damage caused by erosion or deposition of sand
- Low Shrubland, Low Open Shrubland, High Open Shrubland to High Shrubland, Closed Heath
- 296 = D Low Shrubland, Low Open Shrubland, High Open Shrubland to High Shrubland, Closed Heath with damage caused by erosion or deposition of sand.

Bare or Disturbed Areas

- E Beach, Mobile Dunes, Poorly stabilised Dunes and areas disturbed by Waste Disposal
- CO Areas disturbed by Agriculture

INDEX

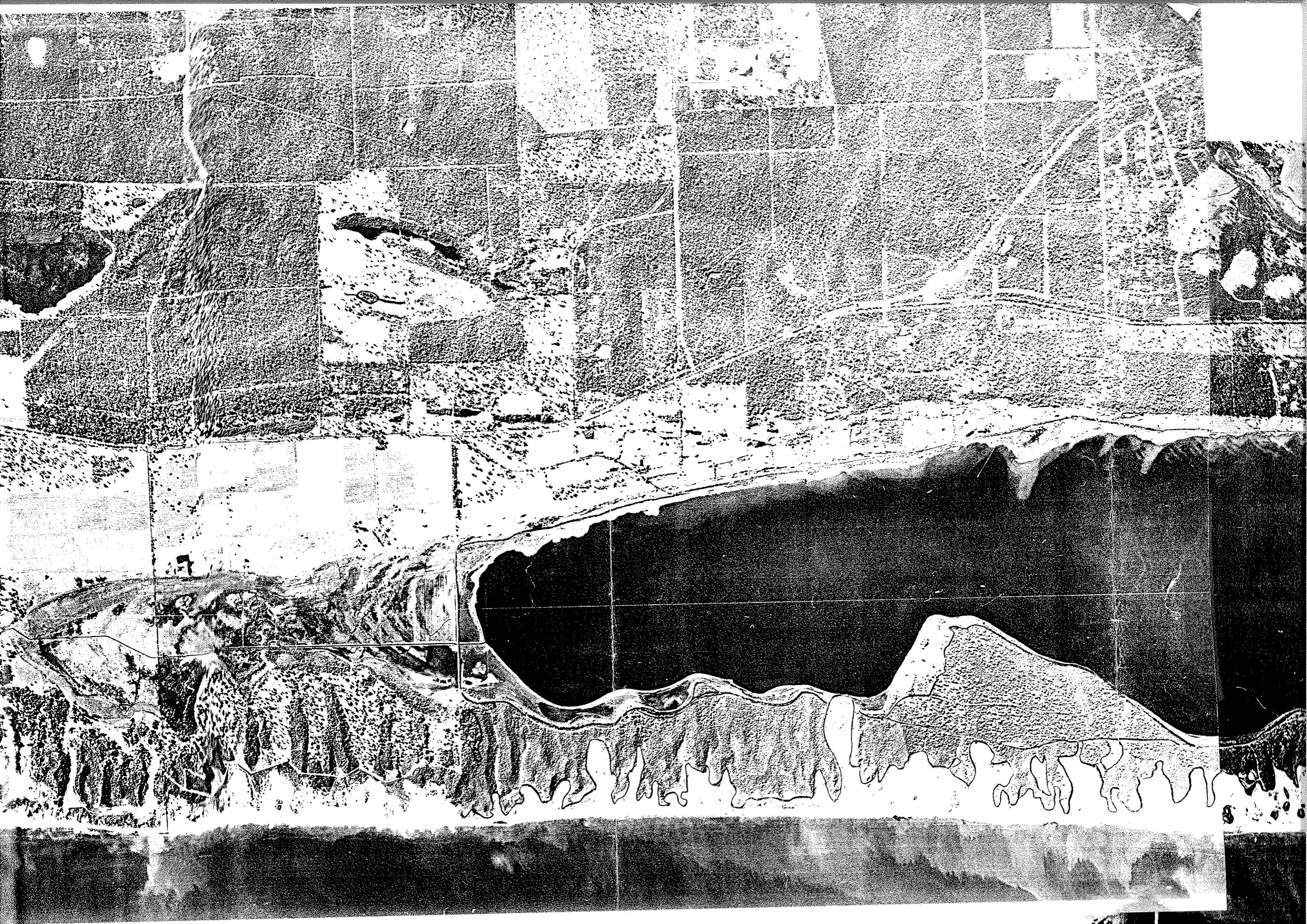


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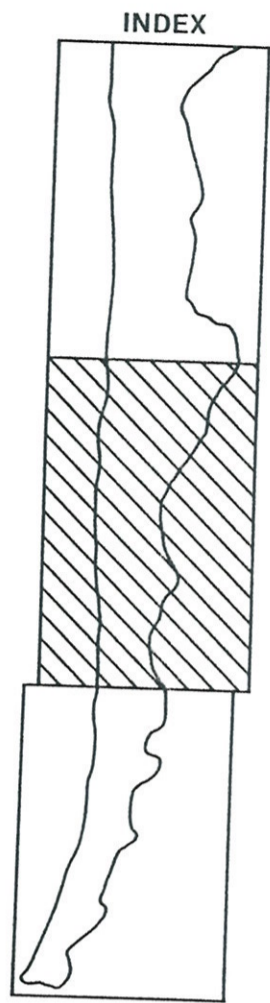
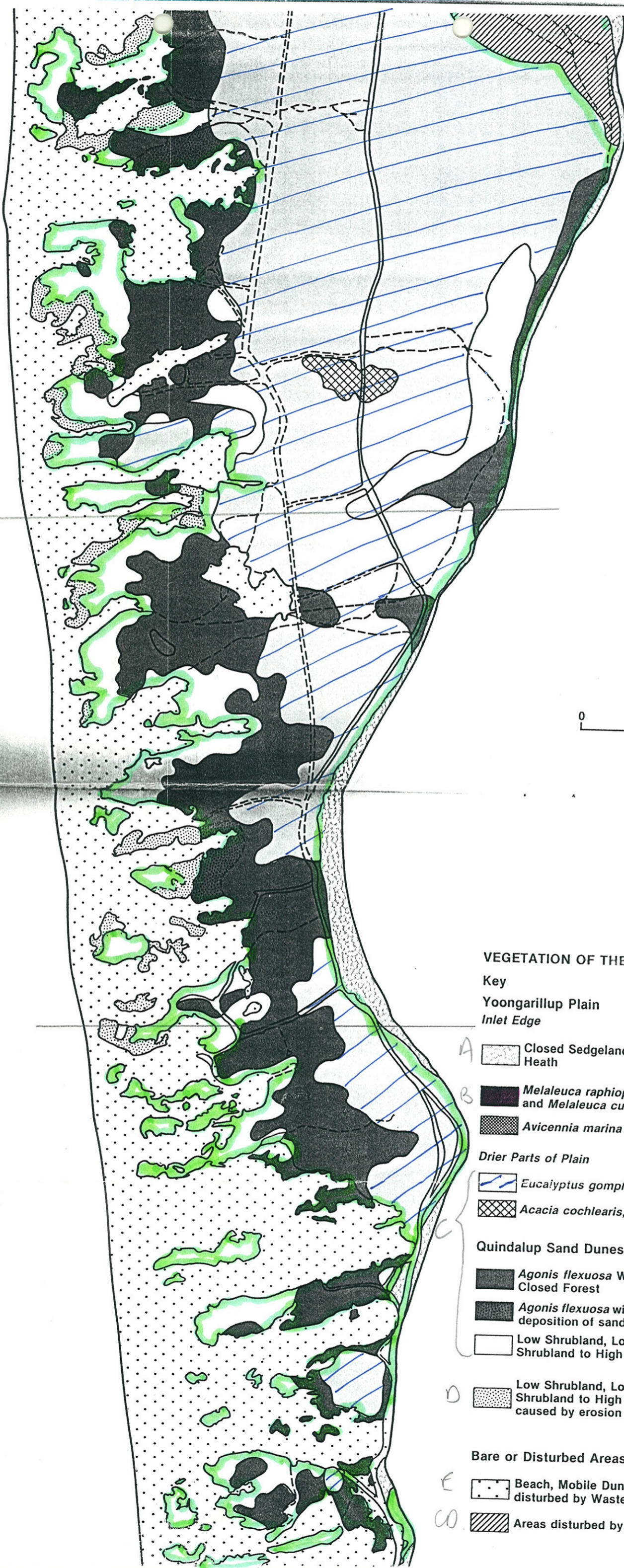


0 500 metres









0 500 metres

VEGETATION OF THE LESCHENAULT PENINSULA

Key

Yoongarillup Plain

Inlet Edge

- A Closed Sedgeslands, Closed Herblands and Low Open Heath
- B *Melaleuca raphiophylla* Low Open Forest to Closed Forest and *Melaleuca cuticularis* Low Open Forest
- Avicennia marina* Closed Scrub

Drier Parts of Plain

- Eucalyptus gomphocephala* (Tuart) Woodland
- Acacia cochlearis*, *Acacia rostellifera* Closed Scrub

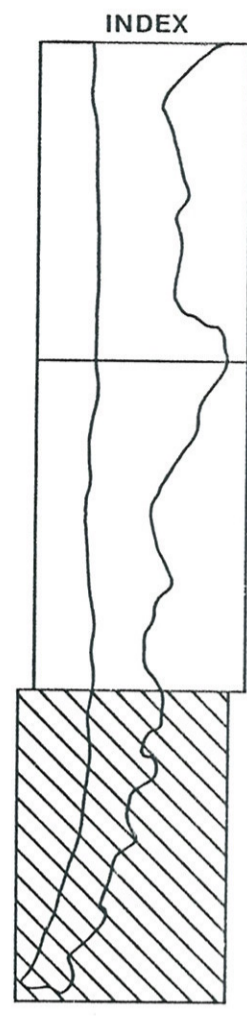
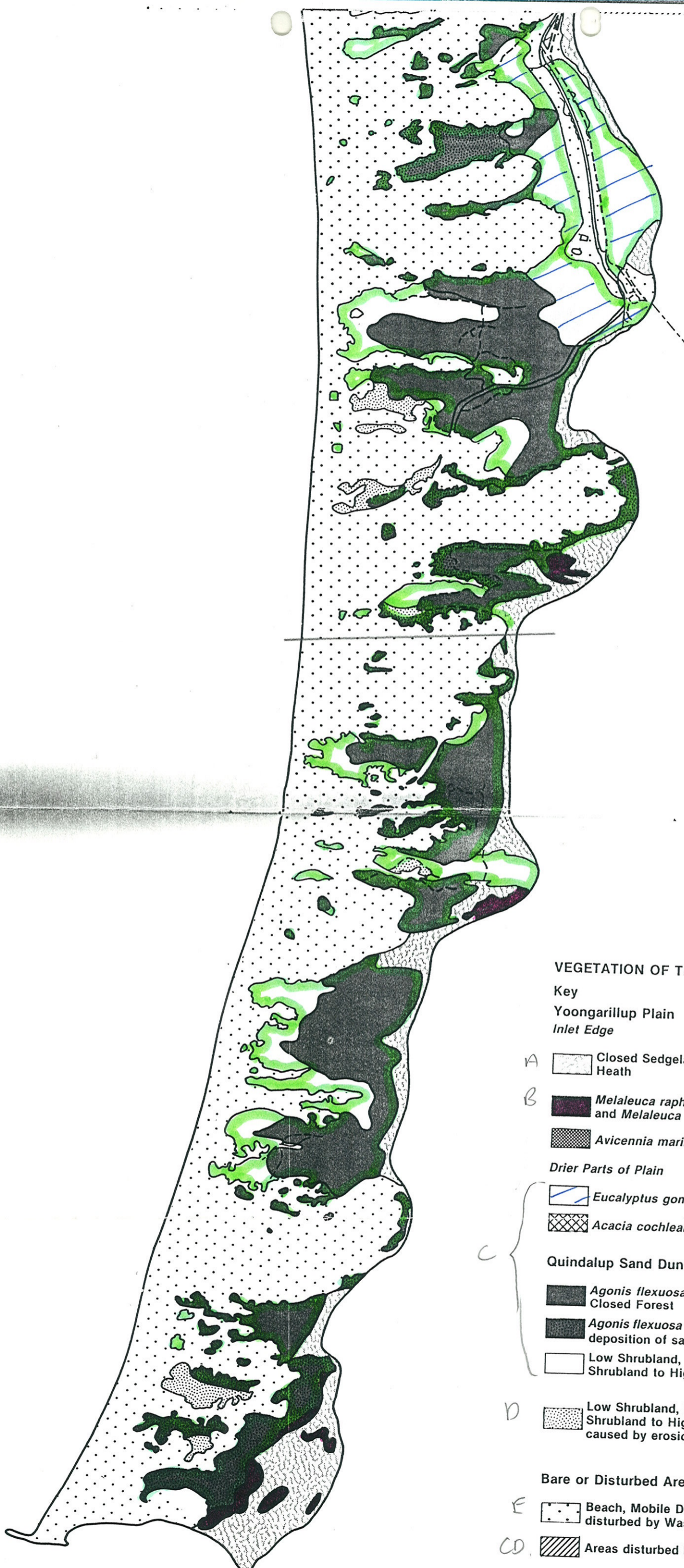
Quindalup Sand Dunes and Plains

- Agonis flexuosa* Woodland Low Open Forest to Low Closed Forest
- Agonis flexuosa* with damage caused by erosion or deposition of sand
- Low Shrubland, Low Open Shrubland, High Open Shrubland to High Shrubland, Closed Heath

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Bare or Disturbed Areas




- E Beach, Mobile Dunes, Poorly stabilised Dunes and areas disturbed by Waste Disposal
- CO Areas disturbed by Agriculture





0 500 metres

VEGETATION OF THE LESCHENAULT PENINSULA




Key
Yoongarillup Plain
Inlet Edge


- A  Closed Sedgelands, Closed Herblands and Low Open Heath
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- D  Low Shrubland, Low Open Shrubland, High Open Shrubland to High Shrubland, Closed Heath with damage caused by erosion or deposition of sand.

Bare or Disturbed Areas

- E  Beach, Mobile Dunes, Poorly stabilised Dunes and areas disturbed by Waste Disposal
- CD  Areas disturbed by Agriculture

AREA INFORMATION

System 6 Area (C or M) or Update Area (Update)

C66

Conservation Area	
Nature Reserve	= Conservation Park Forest, MP 1994 (C66)
Reserve No	
National Park	
Reserve No	
Local Government	
Reserve No	
Other	
Proposed Conservation Areas	
Local Government	
Reserve No	
Other	

Conservation Area	
Nature Reserve	
Reserve No	
National Park	
Reserve No	
Local Government	
Reserve No	
Other	

C66
need to map
as for System 6
boundaries

TOTAL AREA	sys 6	penninsula	
Bushland Area	1866.875	/ 1068.125	hectares
Completely Degraded	13.886 ha		
	remainder E -	334.323	

AREA MAPPED FLORISTIC UNITS

Units	Veg map	Site (Condition)	Code	Bound	Area (ha)	CALM boundaries
17	(B)	φ6(4)	G: LESCH	%	6.302	
296	(D)	No site, extrapolation		%	24.567	
306	(C)	φ1(35), φ2(4), φ3(2.5) φ4(2.5), φ5(3)		%	603.491	
Samphires	(A)	no site		%	85.45	
Avi	B1	no site		%	0.107	

Boundaries determined by use of

aerial photograph	not available
orthophoto	2031 IV SE, ILINE Aug 1991
vegetation map	Trudgen (1984)
soil map	



C66 'A single mangrove'




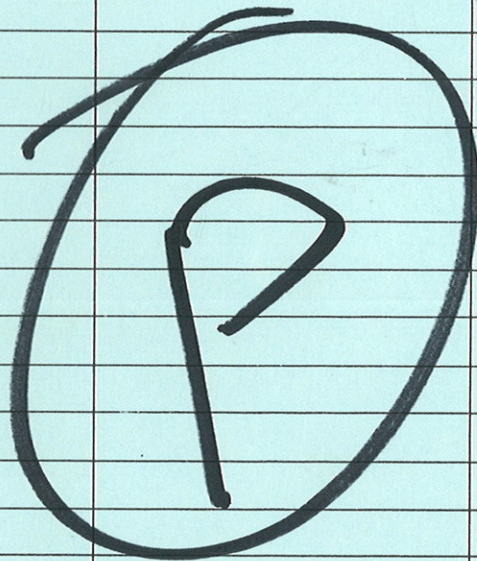
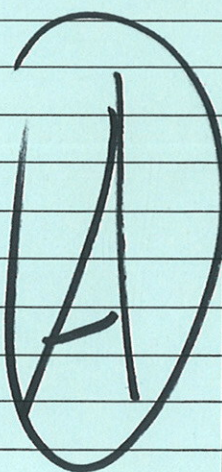
C66 'The Avenue'

68/88/62

ENVIRONMENTAL PROTECTION AUTHORITY

(11)

File Number	PART	
68/88/62	Vol 1	
File Title	VOLUME 1	
CLEARING OF NATIVE VEGETATION - POTATO CROPPING - LESCHENAULT LOC 7 LOT 7 BUFFALO RD BINNINGUP - COONAWARRA NOMINEES P/L		
Volume created: 14/01/1992		
Relevant Files		
68/88		

Folio	Date Referred	Officer	Initials	Folio	Date Referred	Officer	Initials
		VAUGHN COX	✓				
		NIC WIMBUSH	✓				
11-7-02		SANDRA SANTICH					
							

Interim Government Policy for Irrigated Horticulture on Coastal Plains of the South-West.

BACKGROUND

It has become apparent over the last few years that some forms of irrigated horticulture, particularly those involving high rates of water and fertiliser application and several crops per year, are contributing to significant degradation of the ground and surface water resources on the Swan Coastal Plain and parts of the coastal plain on the south coast of Western Australia. Cabinet considered this issue in the Peel-Harvey coastal plain catchment in October 1990, and authorised warnings to be issued to prospective buyers of land for horticulture, and also directed the development of a Statement of Planning Policy to control the location of environmentally sensitive land uses.

A related problem is the displacement of existing market gardening from areas close to the expanding urban front of Perth and other centres. Valuable horticultural lands are being lost for urban development and other land uses. If this trend continues, there may be insufficient land to supply Perth's requirements for fresh vegetables or to support the growing export market for fresh produce.

The environmental assessment arrangements between the Environmental Protection Authority and the Water Authority became cumbersome and unhelpful, and were in need of reform to simplify the approvals process for the industry and to reduce the costs of Government administration. This policy outlines a streamlined approach to these problems, and will be refined as better information on land suitability for horticulture becomes available, and as improved technology reduces the adverse environmental impacts of irrigated horticulture.

This Interim Policy will significantly improve the current situation in a number of ways:

- The process for the review and approval of applications for groundwater well licences will be streamlined, with both water availability and environmental concerns being considered together at the same time;
- The horticulture industry will have a greater level of certainty in which to plan for expansion and future investment;
- There will be lower costs incurred by both individuals and Government;
- There will be long-term security for land zoned for horticulture, and protection of the capacity to produce fresh fruit and vegetables on the Swan and southern coastal plains of Western Australia.
- There will be a higher level of protection for our valuable ground and surface water resources, which will contribute to a sustainable future for us all.

THE POLICY

1. In broad terms proposals for irrigated horticulture will only be approved in areas zoned as suitable for irrigated horticulture on the attached maps.
2. In general terms locations with the following characteristics are likely to be suitable for new horticulture:
 - a) The Department of Agriculture's capability rating of the soil for irrigated horticulture is either Class 1 or Class 2;

- b) The soil Phosphorus Retention Index (PRI) must be greater than or equal to 3 when the minimum watertable depth is 5m or more, or PRI must be greater than or equal to 7 when the minimum watertable depth is 3m;
 - c) The minimum depth to the highest water table must be 3m;
 - d) Loss of contaminated water via surface drainage either does not occur, or can be controlled by containment structures; and
 - e) Untreated leachate or runoff will not directly enter any surface drainage line, permanent wetland or estuary.
3. In accordance with established Government practice, proponents wishing to establish horticulture in areas not identified as suitable must demonstrate the suitability of the site at their cost, and may be liable for a service fee. Proponents must supply adequate information in an application to the WAWA Groundwater Committee on the:
- The Department of Agriculture's horticultural suitability Class for the site, if available;
 - Phosphorus Retention Index (PRI) of the soil;
 - The irrigation and other management measures, including soil amendment, to be applied;
 - The existing vegetation cover on the property;
 - The minimum depth to the highest water table;
 - The surface drainage pattern and local direction of groundwater flow.
4. The Water Authority will only approve well licences for the expansion of existing or the establishment of new horticulture either in areas identified as suitable for horticulture, or where the proponent can demonstrate to the Water Authority that the local characteristics of his land or the technology to be used would ensure acceptable impacts on the soil, groundwater and surface water resources, in accordance with 1, 2 and 3 above.
5. If the Water Authority rejects a proposal, and the proponent wishes to proceed, the proposal must be assessed under the Environmental Protection Act. The natural characteristics of the site may be modified to manage known environmental problems, but any proposal to do so must be referred to the Environmental Protection Authority.
6. Where the clearing of land is necessary, the proponent must submit a Notice of Intent to Clear to the Commissioner for Soil Conservation.
7. The Department of Planning and Urban Development in conjunction with the horticulture industry, local government authorities, the Environmental Protection Authority, the Water Authority and the Department of Agriculture will develop a Statement of Planning Policy to secure important and valuable land resources for horticulture from ad-hoc encroachment by urban, rural/residential or other land uses.
8. The Horticulture Division of the Department of Agriculture will rapidly progress an Environmental Code of Practice for the Horticulture Industry, in consultation with appropriate industry and government bodies. This will raise the awareness of the issues within the industry, and help improve the standard of the horticultural management techniques currently in use. The target date for completion of the Code of Practice is December 1992.

*****A3 SIZED MAPS TO BE SUPPLIED BY ROY STONE AND
LEON ENGLISH OF THE WATER AUTHORITY*****

21 to 3
than or equal to
drainage line, or can be

THE POLICY

1. In broad terms, irrigated horticulture development should be directed to suitable sites in areas zoned for irrigated horticulture.

PART A - APPROVAL FOR CONVENTIONAL IRRIGATED HORTICULTURE OUTSIDE AREAS IDENTIFIED AS HAVING SPECIAL ENVIRONMENTAL REQUIREMENTS

2. Outside those areas identified as having special environmental requirements on the attached maps, sites with the following characteristics are deemed to be suitable for new and expanded horticulture projects utilising conventional techniques:

- a) The site is classified by the Department of Agriculture as having a land capability rating of Class 1 or 2, as shown in Figure .
- b) The soil Phosphorus Retention Index (PRI) must be greater than or equal to 3 when the minimum watertable depth is 5m or more, or PRI must be greater than or equal to 7 when the minimum watertable depth is 3m;
- c) The minimum depth to the highest water table must be 3m;
- d) Loss of contaminated water via surface drainage either does not occur, or is controlled by containment structures;
- e) Untreated runoff will not directly enter any surface drainage line, permanent wetland or estuary;
- f) The irrigated area is to be no closer than 100 m to a watercourse, wetland or estuary, or 250m where groundwater flow is toward the waterbody;
- g) The irrigated area is to be no closer than ⁵⁰ m to any conservation reserve;
- h) The irrigated area is to be located outside the Water Authority's proposed Priority 1 Source Protection Areas;

Applications for well licences for conventional irrigated horticulture in these areas must be accompanied by adequate information to demonstrate that the site meets these criteria.

3. Where the information provided demonstrates that the proposed development meets the criteria given in clause 2 above, and where water is available, the Water Authority may, subject to its discretion, issue a groundwater licence, enabling the project to proceed without further environmental approvals (except subject to Clause 8 below).

PART B - APPROVAL FOR IRRIGATED HORTICULTURE IN AREAS IDENTIFIED AS HAVING SPECIAL ENVIRONMENTAL REQUIREMENTS, OR NOT MEETING THE ABOVE CRITERIA

4. Conventional irrigated horticulture will not be permitted in areas identified as having special environmental requirements, as shown in the attached maps, or where the site does not meet the criteria in Part A, above.

5. The establishment of unconventional irrigated horticulture may be permitted in any area if it utilises new or modified techniques that meet the environmental requirements associated with the site, or overcome the site deficiencies. Any proposal to do so must be referred to the Environmental Protection Authority.

OTHER

6. The Water Authority must refuse applications for well licences for the expansion or the establishment of horticulture either in areas identified as having environmental constraints, or where the applicant cannot demonstrate to the Water Authority that the local characteristics of his/her land would ensure acceptable impacts on the soil, groundwater and surface water resources, in accordance with 1, 2, 3, 4 and 5 above.

7. If the Water Authority refuses to issue a well licence as a result of this policy, the applicant may submit his/her proposal for assessment under the Environmental Protection Act.

8. Where the clearing of land over 1 ha in area is necessary, the proponent must submit a Notice of Intent to Clear to the Commissioner for Soil Conservation, in accordance with the Soil Conservation Act.

9. The Department of Planning and Urban Development in conjunction with the horticulture industry, local government authorities, the Environmental Protection Authority, the Water Authority and the Department of Agriculture will develop a Statement of Planning Policy to secure important and valuable land resources for horticulture from ad-hoc encroachment by urban, rural/residential or other land uses.

10. The Horticulture Division of the Department of Agriculture will rapidly progress an Environmental Code of Practice for the Horticulture Industry, in consultation with appropriate industry and government bodies. This will raise the awareness of the issues within the industry, and help improve the standard of the horticultural management techniques currently in use. The target date for completion of the Code of Practice is December 1992.

W A T E R W A Y S
C O M M I S S I O N

Our Ref: ETW:df/1.2 : 5.7
Your Ref:
Enquiries:

The Regional Manager
Department of Agriculture
PO Box 1231
BUNBURY WA 6230

Dear Sir,

**POTATO PRODUCTION ON LESCHENAULT LOCATION 7 -
MAIOLO**

Reference your recent advice that Maiolo may proceed with potato production and clearing for pasture improvement on Leschenault Location 7, subject to the cropping being restricted to the eastern sector of the proposed gully site. In making its decision, your department has made an assessment of soil types in the area, and checked the groundwater level at the site of the proposed potato crop.

We acknowledge this effort on your part, the results of which represent almost all of the known data for the area concerned. It was our hope that a far more detailed study of soils, groundwater and surface water would have been carried out, preferably by the proponent, to be absolutely sure that this and potentially other activities do not increase levels of nutrients or other chemicals in the northern Leschenault Estuary area. In addition, the wetlands and samphire areas to the north of the estuary are valuable and important feeding and breeding areas for waterbirds, and are in need of rehabilitation and protection.

It has come to our attention that the drainage from Leschenault Location 7 has been enhanced recently, by excavating six or more channels through the bund separating the Parkfield Drain from the lowland portion of Leschenault Location 7. The advice that Mr Maiolo received from the Environmental Protection Authority (dated 3 December, 1991) stated "there be continuous management to prevent any possibility of pollution from nutrients moving into the adjoining drain which flows into Leschenault Inlet".

It would appear that these recent works are contrary to the advice from the Environmental Protection Authority. Would you please review the activity on Leschenault Location 7 to see whether there is anything your department can do to ensure that nutrients and chemicals are retained on the site.

2-

Potato Production on Leschenault Location 7 - Maiolo.

Should you require further information or clarification of any of the above points, please contact Mr Eric Wright at the LIMA office on telephone 211875.

Yours faithfully,

Sir Donald Eckersley, OBE
CHAIRMAN

26 February, 1992

c.c Mr Brett Vukelic - Harvey

COPY

14



SHIRE OF HARVEY

ALL COMMUNICATIONS TO BE ADDRESSED TO THE SHIRE CLERK

Our Reference: 1522/205 AD:SR
Enquiries: Mr Diggin

Mr Maiolo
C/- Post Office
DONNYBROOK WA 6239

Mr V. Lombardo
Coonawarra Nominees P/L
PO Box 157
SCARBOROUGH WA 6019

ENVIRONMENTAL PROTECTION AUTHORITY
19 DEC 1991
File No. 68/8862 UCO Initials

Dear Sir,

APPLICATION FOR CLEARING - GROWING OF POTATOES LOT 7 BUFFALO ROAD, PARKFIELD

Council, at its ordinary meeting on the 10th December, 1991, gave due consideration to your application for clearing of approximately 18 hectares for potato cropping on portion of Lot 7 Buffalo Road, Parkfield.

After considering comments from the Environmental Protection Authority, and the Waterways Commission, Council resolved to defer any approval of this application until the concerns of the Leschenault Inlet Management Authority, the Department of Agriculture and the Water Authority of Western Australia have been resolved by the applicant to the satisfaction of those authorities, and any additional information on a water licence being made available for discussion at the next meeting of Council.

You have the right of appeal within 60 days of the date of this decision.

It is suggested that you present a nutrient management plan to these authorities for their approval.

Please contact Mr Alan Diggin if you wish to discuss this matter further.

Yours faithfully,

Keith J. Leece (Clerk)

KEITH J. LEECE
SHIRE CLERK



17 DEC 1991

~~52783~~

**ENVIRONMENTAL IMPACT ASSESSMENT OF HORTICULTURE
PROPOSALS VIA REFERRAL OF GROUNDWATER LICENCE
APPLICATIONS**

1. Because these referrals have been assessed from time to time at various levels and have continued to come before the Authority, we have developed a new procedure whereby referrals of groundwater licence applications will in future be dealt with as correspondence.
2. I have advised officers of the Water Authority, the Department of Agriculture, the Waterways Commission and the Office of Catchment Management of these arrangements.
3. In this context it has been agreed jointly that a Cabinet Minute be prepared relating to determining strategic locations for irrigated horticulture on the Swan Coastal Plain (draft attached).
4. We are now proceeding to deal with these issues on the basis of correspondence, and in the context of Section 16 of the Environmental Protection Act, which provides for advice to be given on matters affecting the environment.
5. Recently the issue of a well licence for horticulture development (potato growing) at Lot 7 Buffalo Road, Binningup, was referred to the EPA. The following approach has been taken:
 - The proponent (Mr Maiolo) has advised that the land owner has not sought to develop groundwater from wells, but intends to irrigate from dams. We have advised (per this file) that we will not be assessing the proposal. However, the letter points out that there is an obligation upon such developers to ensure that nutrient enrichment off the property does not occur.
 - Subsequently Mr Tony Ford of the Water Authority, Bunbury, has advised that the dam water is in fact groundwater from soaks, and will require the issuing of a well licence.
 - The land owner, Mr Lombardo, has advised that he has sought advice from the Agriculture Department with respect of nutrient control, and his willingness to grow, as a perimeter buffer around the property, fast-growing eucalypts, eg Tasmanian blue gums.
 - I have written to the Department of Agriculture, attention Mr J Dixon (and have discussed on the telephone this issue with him and with Kevin Goss), to inform him that this project and similar applications for groundwater well licences will not be subject to environmental impact assessment, but rather the Water Authority on the one side and the Agriculture Department on the other have an environmental management responsibility to assist land owners to develop projects in an environmentally sound manner
 - On the same matter I have called and discussed the issue of horticulture and the Maiolo matter in particular with:

- Brian Sadlier, Water Authority
 - Tony Ford, Water Authority, Bunbury
 - Henk Van der Wiele, EPA Bunbury
 - Naomi Arrowsmith, Water Authority
 - Colma Keating, Minister for Agriculture's Office
- These matters have been raised with the Minister for the Environment, Bob Pearce, who has indicated that he will be discussing them with Mr Bridge.

6. The thrust of this action is to enable the Water Authority and the Department of Agriculture to manage their portions of the environment, and from our part to reduce the number of issues undergoing environmental impact assessment, either on a formal or informal basis.



C C Sanders
Director
Environmental Investigations Division

9 December 1991

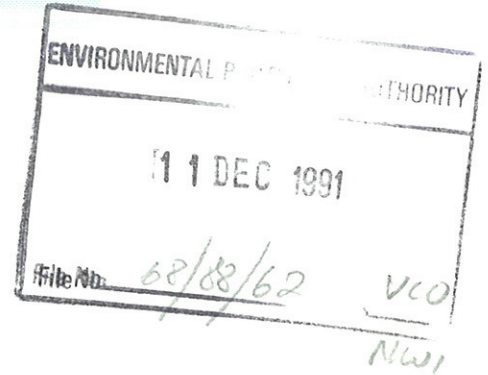
Attach

WATERWAYS
COMMISSION



LESCHENAULT INLET
MANAGEMENT
AUTHORITY

Our Ref: ETW:DF 5.7
Your Ref:
Enquiries:



The Chairman
Environmental Protection Authority
1 Mount Street
PERTH WA 6000

Dear Sir,

RE: HORTICULTURE AND LAND CLEARING ADJACENT TO LESCHENAULT ESTUARY.

Recent developments and proposals for development in the catchment of the northern Leschenault Estuary are causing concern for this Authority.

The Shire of Harvey has received three applications for land clearing and horticulture development between Buffalo Road and Binningup Road in the last two months (Leschenault Location 7; Lots 4 and 5 Leschenault Location 48; Lot 2 Leschenault Location 48). The Department of Agriculture has received applications for land clearing on these lots and the Water Authority of Western Australia has received an application for a groundwater well licence to support potato production on Leschenault Location 7.

*clearing of land. Parks & Wildlife
Coonawarra Nominees 13/11/91 151373*

In addition, the water allocation for the groundwater licence on Parkfield Farm (Smith and Dell Agostino Wellington Location 14) has been increased this year.

This intensification of horticulture is proceeding without any scientific assessment of the impact that these activities will have on the nearby Leschenault Estuary.

The northern Leschenault Estuary is not well flushed, and during summer can become hyper-saline. This generally shallow (0.5m and less) area is an important nursery area for juvenile fish, and provides a sanctuary for waterbirds during summer when inland waterbodies dry out. The sand and mud flats are utilised by migratory wading birds, and this area may become essential to these birds with major developments in the south of the estuary disturbing feeding and roosting areas. An amateur ornithologist recently recorded 1500 migratory waders at the north end of the Leschenault Estuary.

*No response received at
Karratha previously referred
Stable*

82566 ✓

Horticulture and Land Clearing adjacent to Leschenault Estuary

We would like your Authority as the organisation with overall responsibility for protection of the environment to urgently take steps to ensure that no further clearing or development occurs in the catchment of the northern estuary without a detailed scientific assessment of the impact that development will have on the estuary.

In addition, the existing horticulture activities should be reviewed to assess the level of impact currently occurring, and procedures should be put in place to ensure that the combined effect of all activities does not contribute nutrients or pesticides to the estuary system. The Waterways Commission and LIMA are happy to help as much as possible.

Should you wish to discuss this matter, please contact Mr Eric Wright at LIMA on telephone (097) 211875, or Mr David Deeley at the Waterways Commission on telephone 321 8677.

Yours faithfully,



Sir Donald Eckersley, OBE
CHAIRMAN

5 December, 1991

c.c Water Authority of Western Australia
Shire of Harvey
WA Department of Agriculture



16

THE DIRECTORATE

WESTERN AUSTRALIAN DEPARTMENT OF AGRICULTURE

Our ref: RG:MW:DRM
 Your ref: 66/88
 Enquiries: Mr K Goss
 Date: December 18, 1991

3 Baron-Hay Court
 South Perth
 Western Australia 6151

Tel: (09) 368 3494
 Telex: AA93304
 Fax: (09) 368 1205

Mr C Sanders
 Director
 Environmental Investigations Divisions
 Environmental Protection Authority
 1 Mount Street
 PERTH WA 6000

ENVIRONMENTAL PROTECTION AUTHORITY	
24 DEC 1991	
File No. 66/88/62	Initials JCO

Dear Col

IMPLICATIONS OF THE BINNINGUP GROUNDWATER LICENCE CASE

While I can understand the EPA's desire to withdraw from case-by-case assessments of applications for well licences, the decision "midstream" in the Maiolo/Lombardo case and your letter to Jim Dixon, have resulted in some confusion.

Attached is an appropriate letter to the Water Authority explaining our position. In this case I believe we were providing "expeditious and active management", but it is a question of what authority we have to support that management in the case of proposed land use change.

In retrospect it would have been a more orderly transition if you had awaited the implementation of the proposed Government policy for irrigated horticulture on coastal plains. If you look at the draft Cabinet minute you will note the following features:

- separation of the handling of future land use from current land use;
- that the Water Authority powers on well licence approvals and Statements of Planning Policy are used to place conditions on future use. Our job is to advise, etc; and
- that we take responsibility for seeing Codes of Practice developed to modify current land use.

If there is some doubt about the Water Authority's powers in well licence approvals then that must be sorted out as soon as possible. I understand this has been recently discussed.

52908
 6



For our part, we believe the proposed policy is an excellent initiative, which was recently endorsed by our Executive Group, and it will have our full support. We would appreciate a quick resolution to the current revisions so that we all have a clearer path to follow.

Yours sincerely

Kevin Goss

(K Goss)

ACTING DIRECTOR OF RESOURCE MANAGEMENT

Att.

4. Mr Maiolo has indicated he will abide by a fertiliser program advised by the Department of Agriculture. This we will provide through our Bunbury Office.
5. Meanwhile, we have requested further information - the intended phosphorus and nitrogen application rates, irrigation scheduling and depth to the groundwater table. The latter is important because under a proposed policy for irrigated horticulture on the coastal plain we will apply constraints based on a combination of phosphorus retention index and depth to watertable. A PRI has already been determined.
6. The "bottom line" is that we will do the necessary work to assess the potential hazard, we will provide the necessary advice on fertilising and irrigation to minimise the export of nutrients, and we will recommend other treatments (eg Euc globulus shelterbelts) to retain any nutrients on-site.

However, in general, it needs to be appreciated that we have limited scope for enforcement where a prospective change in landuse is involved. That is why we are supportive of the proposed Government policy and its linkage to statutory planning instruments.

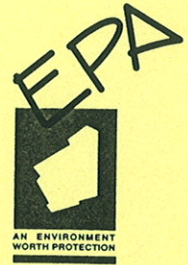
Given the EPA decision I will be interested to learn of your attitude to using decisions on well licence applications as a means of controlling such developments for their environmental impact.

Yours sincerely

Kenn Goss

(K Goss)
ACTING DIRECTOR OF RESOURCE MANAGEMENT

Copies to: G de Chaneet
B Vukelic
C Sanders, Environmental Protection Authority
R Murton, Water Authority of Western Australia,
Bunbury
B Hamilton, Waterways Commission



DIRECTOR GENERAL OF AGRICULTURE

Attention: Mr J Dixon
Division of Resource Management

Your ref:
Our ref: 68/88
Enquiries: Mr C Sanders

Dear Mr Dixon

**GROUNDWATER LICENCE APPLICATION, LOT 7 BUFFALO ROAD,
BINNINGUP**

You may be aware of the proposal of Mr L Maiolo of Donnybrook to establish a potato growing enterprise at Lot 7 Buffalo Road, near the northern boundary of the Leschenault Inlet.

Mr Maiolo as I understand it, first sought a groundwater licence for this proposal, but this has been withdrawn in favour of using water from dams. The Environmental Protection Authority (EPA) has been asked by a number of groups to undertake environmental impact assessment of this proposal.

The Authority feels that this type of project is one that requires the expeditious and active management of the Department of Agriculture, and to use the Environmental Protection Act as a means of preventing or setting management conditions for the project, is mis-using the EIA process. Nonetheless the Leschenault Inlet Management Authority, the Waterways Commission, the Water Authority and other parties, have all expressed concern to be ensured that if the project proceeds that there is no likelihood of nutrient enrichment of Leschenault Inlet. Largely these groups would prefer that such an intensive agricultural development not occur in this vicinity.

The EPA would hope that the Department of Agriculture in line with the Draft Paper being prepared for Cabinet relating to horticultural developments and the environment, will actively work with Mr Maiolo to ensure that his land use is environmentally acceptable.

Environmental
Protection Authority

1 Mount Street Perth
Western Australia 6000
Telephone (09) 222 7000
Facsimile (09) 322 1598

I have attached herewith a number of letters that we have sent to various parties regarding this project, for your information. I have discussed this issue with Greg Luke of the Horticulture Division.

Yours sincerely



C C Sanders
DIRECTOR
ENVIRONMENTAL INVESTIGATIONS DIVISION

4 December 1991

Encl

cc

1. Shire Clerk, Shire of Harvey,
2. Mr R Murton, SW Region, Water Authority, PO Box 305, Bunbury WA 6230
3. Dr B Hamilton, Waterways Commission
4. Mr Brett Vukelic, Department of Agriculture, Harvey



Mr L S Maiolo
c/- Post Office
DONNYBROOK WA 62339

Your ref:
Our ref: 68/88
Enquiries: Mr C Sanders

Dear Mr Maiolo

**GROUNDWATER LICENCE APPLICATION, LOT 7 BUFFALO ROAD,
BINNINGUP**

The Environmental Protection Authority (EPA) has been asked to comment further on your proposal to develop land at Leschenault Loc 7, Buffalo Road for the purposes of potato growing.

The EPA's position with respect to this proposal is that you as the developer and manager, and the owners of Lot 7, have an obligation to do everything in your power to prevent nutrient enriched surface or groundwater from leaving the property.

I understand that you are prepared to meet this commitment, firstly by carrying out your project acting on the advice of the Agriculture Department's Horticulture Section, particularly with respect to the use of fertilisers; and secondly, through the planting of a perimeter buffer of fast-growing, eucalyptus trees, eg Tasmanian blue gums, and fencing these trees off from grazing animals. The buffer will be managed to absorb excess nutrients (nitrogen and phosphorus).

In summary the EPA's position is that nutrients must be fully retained on the property and that there be continuous management to prevent any possibility of pollution from nutrients moving into the adjoining drain which flows to Leschenault Inlet. You should ensure that you provide this commitment in writing to the Department of Agriculture and to the Shire of Harvey.

Yours sincerely

C C SANDERS
DIRECTOR
ENVIRONMENTAL INVESTIGATIONS DIVISION

3 December 1991

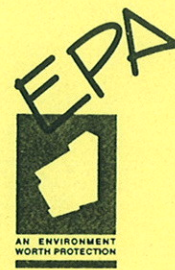
cc:

1. Shire Clerk, Shire of Harvey,
2. Mr R Murton, SW Region, Water Authority, PO B ox 305, Bunbury WA 6230,
3. Dr B Hamilton, Waterways Commission,
4. Mr Brett Vukelic, Department of Agriculture, Harvey, and 5. Mr Lombardo

Environmental
Protection Authority

1 Mount Street Perth
Western Australia 6000
Telephone (09) 222 7000
Facsimile (09) 322 1598

68/88/62



Shire Clerk
Shire of Harvey
PO Box 163
HARVEY WA 6220

Your ref:
Our ref: 68/88
Enquiries: Mr Vaughn Cox

Dear Sir

**CLEARING AND POTATO PRODUCTION, LOC 7 BUFFALO RD,
LECHENAULT**

I understand that this proposal is to clear land for potato production on a location within the Parkfield Drain. As you are probably aware, this land forms part of the surface catchment of Leschenault Inlet.

The Environmental Protection Authority is most concerned at any proposals for intensive horticulture, such as potato growing, in the coastal plain catchment of the Leschenault Inlet. Intensive horticulture has been associated with the nutrient enrichment of many wetlands. Such nutrient enrichment encourages the growth of noxious algae, which then decay and pollute waterways, killing many natural wetland species and reducing the recreational amenity of that waterway. This series of events is well known in the Peel-Harvey Estuary.

The Environmental Protection Authority considers that the above proposal is likely to lead to further nutrient enrichment of the Leschenault Inlet. Such increases in nutrient levels will cause unacceptable environmental degradation of that important waterbody and a loss of residential amenity in the northern portions of the estuary. Therefore, this Authority recommends that the Shire of Harvey reject the above proposal or that approval be subject to approval from the Leschenault Inlet Management Authority and or the Environmental Protection Authority.

Yours sincerely

C C Sanders
DIRECTOR
ENVIRONMENTAL INVESTIGATIONS DIVISION

18 November 1991



SHIRE OF HARVEY

ALL COMMUNICATIONS TO BE ADDRESSED TO THE SHIRE CLERK

URGENT

FACSIMILE MESSAGE

TO: Environmental Protection Authority

FAX NO: (09) 3221598

FROM: Alan Diggins

ATTENTION: Vaughn Cox

SUBJECT: Loc 7 Buffalo Road Leschenault

DATE: 14/11/91

NO. OF PAGES (INCLUDING THIS PAGE): 3

FILE REFERENCE: _____

MESSAGE

Can you please advise on the EPA's response to the application for clearing on Loc 7 Leschenault of approximately 50 acres for potato production

Vince Lombardo has advised Council that Colin Sanders from the EPA advised "That there is no problem if dam water issued"

The existing trees have been affected by bush fire and the perimeter will be planted with Tasmanian blue gums.

IF YOU HAVE NOT RECEIVED ALL PAGES, PLEASE CONTACT THIS OFFICE IMMEDIATELY. OUR FILE REFERENCE SHOULD BE QUOTED ON ALL CORRESPONDENCE.

Can you please advise if the EPA has any concerns before Council considers the application on Tuesday next.

regards Alan.

OCEAN PLAZA PTY LTD

SHOP 12
 OCEAN PLAZA SHOPPING CENTRE
 10-12 SCARBOROUGH BEACH ROAD
 CNR WEST COAST HIGHWAY
 SCARBOROUGH W.A. 6019

ALL CORRESPONDENCE TO:
 P.O. BOX 157
 SCARBOROUGH W.A. 6019

TELEPHONE: (09) 245 1670
 FACSIMILE: (09) 245 2183

FAX NO. CALLED 097 292053

ATTENTION: MR. ALAN BIGGEM

COMPANY NAME: SWEET OF HARVEY

FROM: VENICE LOMBARDO

DATE: 14/11/91

TIME: 4:05 PM

NO. OF PAGES (Including this one.) 2

SUBJECT: RE: LET 7 LESCHENAUPT

MESSAGE: PLS FIND COPY OF MAP OF THE
ABOVE SITE SHOWING THE APPROXIMATE
LOCATION OF CLEARING.

APROX: 50 ACRES.

~~THE~~ TASMANIAN BLUE GUMS
WILL BE PLANTED ON THE PERIMETER OF THE
PROPOSED CLEARING.

MR. DEAN MOORE OF THE AGRICULTURE DEPT HARVEY HAS INDICATED THE USELESS BUREAU
MR. COLIN SANDERS OF EPA ADVISE THAT THERE IS NO PROBLEM IF DAM WATER
IS USED.

Regards

V. Lombardo on behalf
of L. Moyalo.

F A C S I M I L E

M E S S A G E S

FACSIMILE TRANSMISSION REQUEST
DEPARTMENT OF AGRICULTURE
HARVEY

Fax: (097) 29 1673
To: V Cox + C Sanders
From: Brett Vukelic
No. of Pages 2 1/2 Date: 18.11.91

123.4497 ha

16.7874 ha

Road No. 2430

SPRINGS HILL ROAD

A 18414
4071
4377 m²
Stopping Place

SHIRE

OF

CG
7

CG
14

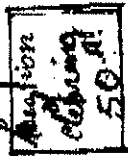
323.7485 ha

333.4610 ha

4779.

5052

Planting of T.B. gum on perimeter of
stop. clearing.
R.P.



Road No. 9138

BUFFALO ROAD

117
ha. 2822 ha

H.W.M.

160566
UBI 5.5000 ha
FLORA & FAUNA

Original
Location
Boundary

72

44.7679 ha

72

14.2571 ha

4749

11

53.2895

ha.

Burrageup

12

5.6755 ha

22

54.4279 ha

4482

1246

28

27

28

Follow

1
4442.

376.4642 ha

24

45.4386 ha

4417

21

50.4439 ha

21

50.4439 ha

2

5.3161 ha

3

75755

33

126316

5202

51881

30

3

4

39.4821 ha

LESCHENAULT

INLET

Waterloo Head

Location

5407

2

207.5334 ha

4839.



3

4

39.4821 ha



Western Australian
Department of Agriculture

Please address all letters to the Officer in Charge, quoting our reference numbers to your correspondence.

Your Ref:

Our Ref:

Enquiries Mr.

Date

646.02

Vukelic

15 November, 1991

LFJ

Mr V. Lombardo
Coonawarra Nominees Pty Ltd
PO Box 157
SCARBOROUGH WA

Harvey District Office
Becher Street
HARVEY, 6220.

Dear Vince,

RE: NOTICE OF INTENT TO CLEAR (NOI)
LESCHENAULT Loc. 7 BUFFALO ROAD

The Department of Agriculture wishes to advise COONAWARRA NOMINEES PTY LTD that the assessment of the NOI, lodged September 6, 1991 has been re-opened.

Further advice is being sought relating to the possible effects that the limestone hard pan (c horizon) will have on the potential phosphorus export, under potato cropping conditions at the proposed clearing site.

.../2

To assist with this assessment the Department of Agriculture is seeking further information relating to:-

- i. Soil sampling results indicating present soil phosphorus status at proposed site.
- ii. Proposed superphosphate application rate and program.
- iii. Proposed nitrogen application rate and program.
- iv. Proposed irrigation scheduling guidelines.
- v. Water Authority - ground water licence approval.
- vi. Position of proposed development relating to the Leschenault Inlet and groundwater levels.

The Department thanks you for your co-operation.



(Brett Vukelic)
SOIL CONSERVATION OFFICER

cc. Mr L Maiolo
Waterways Commission
Water Authority of WA
Environmental Protection Authority
Leschenault Inlet Management Authority
Department of Agriculture, Bunbury Regional Office
Shire of Harvey

Our Ref
Our Ref
Enquiries
Tele Direct

6-sw-252.384
R Murton
(097) 910496



**WATER
AUTHORITY**
of Western Australia

61 VICTORIA STREET
BUNBURY W.A.
Postal Address: P.O. Box 305 Bunbury
Western Australia 6230
Telephone: (097) 91 0400 Fax: (097) 91 0432

68/88/62

Environmental Protection Authority
1 Mount Street
PERTH WA 6000

Attention: Mr Geoff Bott

**GROUNDWATER LICENCE APPLICATION TO IRRIGATE 5HA POTATOES
ON LESHENAULT LOCATION 7 BUFALO ROAD BINNINGUP
WITHIN THE SOUTH WEST COASTAL GROUNDWATER AREA.**

The following details of a Groundwater Application have been received by the South West Regional Office of the Water Authority and need to be referred to your Authority for consideration for formal assessment. The details of this application are:

Owner: LS MAIOLO
Postal Address: C/- POST OFFICE
Town: DONNYBROOK
Telephone: (097) 317145
Property Location: LESCHENAULT LOC. 7 BUFFALO ROAD
Referral Area:
Horticulture: 5HA POTATOES
Estimated Water Use as determined by the Water
Authority: 18,000kL
Water Authority Reference: 6SW252.384

In order to expedite the proponents application I have enclosed a Copy of the Application.

Should you have any further questions then please contact Mr R Murton directly by telephoning (097) 910496 during office hours at the Bunbury office.

The Water Authority is also aware that no decision can be made until the Minister for the Environment has authorised the CER or otherwise, however we have notified the proponent that this application has been referred to the EPA.

CORRESPONDANCE CRN?

R Murton
Richard Murton
SENIOR WATER RESOURCES OFFICER
SOUTH WEST REGION
3rd October, 1991

51548

AGR

Your Ref
Our Ref
Enquiries Mr
Date

646.02
Vukelic
11 November 1991
LFJ

Western Australian Department of Agriculture

Please address all letters to the Officer in Charge, quoting our reference numbers to your correspondence.

Coonawarra Nominees Pty Ltd
PO Box 157
SCARBOROUGH WA 6019

Harvey District Office
Becher Street
HARVEY, 6220.

ENVIRONMENTAL PROTECTION AUTHORITY
13 NOV 1991
File No. 68/88 Initials VCO ✓

RE: NOTICE OF INTENT TO CLEAR

LESCHENAULT Loc 7

The Department of Agriculture has investigated the Location 7 Leschenault.

Other Government bodies have been notified, and soil samples tested by Govt. Chemical Laboratories.

Based on the test results, the Department of Agriculture must object to the proposed clearing of land for the purpose of potato cropping.

The potential for net export of phosphorus (associated with potato cropping) into the Leschenault Estuary System via Parkfield drain is high.

Thank you for your co-operation.

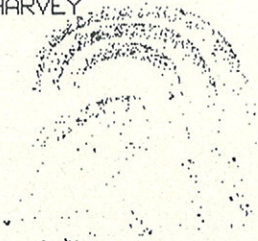
(Brett Vukelic)
SOIL CONSERVATION OFFICER

Enc. Test results

- cc. Waterways Commission
- Water Authority of WA
- Environmental Protection Authority
- Leschenault Inlet Management Authority
- Department of Agriculture, Bunbury Regional Office

51878 INFO

125/85
77/78



**Western Australian
Department of Agriculture**

Please address all letters to the Officer in Charge, quoting our reference numbers to your correspondence.

Your Ref:
Our Ref: 646.02
Enquiries Mr. Vukelic
Date 15 November, 1991
LFJ

Mr V. Lombardo
Coonawarra Nominees Pty Ltd
PO Box 157
SCARBOROUGH WA

Harvey District Office
Becher Street
HARVEY, 6220.

Forwarded to Kof/CS 18/11

Dear Vince,

RE: NOTICE OF INTENT TO CLEAR (NOI)
LESCHENAULT Loc. 7 BUFFALO ROAD

The Department of Agriculture wishes to advise COONAWARRA NOMINEES PTY LTD that the assessment of the NOI, lodged September 6, 1991 has been re-opened.

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.../2

To assist with this assessment the Department of Agriculture is seeking further information relating to:-

- i. Soil sampling results indicating present soil phosphorus status at proposed site.
- ii. Proposed superphosphate application rate and program.
- iii. Proposed nitrogen application rate and program.
- iv. Proposed irrigation scheduling guidelines.
- v. Water Authority - ground water licence approval.
- vi. Position of proposed development relating to the Leschenault Inlet and groundwater levels.

The Department thanks you for your co-operation.



(Brett Vukelic)
SOIL CONSERVATION OFFICER

- cc. Mr L Maiolo
Waterways Commission
Water Authority of WA
Environmental Protection Authority
Leschenault Inlet Management Authority
Department of Agriculture, Bunbury Regional Office
Shire of Harvey



Mr R Murton
Senior Water Resources Officer
South West Region
Water Authority
PO Box 305
BUNBURY WA 6230

Your ref: 6-sw-252.384
Our ref: 68/88:51546
Enquiries: Mr C Sanders

Dear Mr Murton

GROUNDWATER LICENCE APPLICATION, LOCATION 7 BUFFALO ROAD BINNINGUP

You referred to the Environmental Protection Authority (EPA) an application you received from Mr L Maiolo of Donnybrook for a groundwater licence for the purposes of horticulture development - potato growing.

I have been advised by an associate of Mr Maiolo that it is unlikely that the application for a groundwater licence will be proceeded with as it is likely they will abstract water from dams on the property.

I have enclosed herewith two letters I have sent to Mr Maiolo indicating the EPA's concern with the health of Leschenault Inlet. On the indication that a groundwater licence is not being sought through you we propose to take no further action.

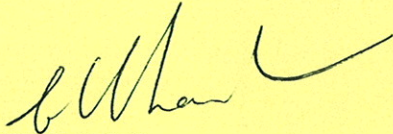
However you should be clearly aware of the EPA's and the Waterways Commission's - Leschenault Inlet Management Authority - concerns regarding intensive horticulture being developed either close to, or along drains which empty into the Inlet.

The EPA has indicated, and this matter has been discussed with senior officers of both the Water Authority and the Agriculture Department, that horticulture and other land uses which are likely to result in the intensive use of fertilisers should be managed to ensure that there is very low levels of nutrient discharge from the property. You are strongly encouraged for this reason to consider these issues when land owners approach you for applications for a groundwater licence, particularly as we are not aware of any attempt by the proponent to control nutrient losses, off-site.

In this regard a joint Paper is in preparation for Government with the intention of having an agreed strategy for government agencies in the handling of intensive agriculture activities in environmentally sensitive locations.

I am sending a copy of this letter also to the Director of Waterways, the Officer in Charge of the Agriculture Department, Harvey, and to the Groundwater Section of the Water Authority, Perth, so that all are aware of the EPA's position in these matters.

Yours sincerely



C C SANDERS
DIRECTOR
ENVIRONMENTAL INVESTIGATIONS DIVISION

8 November 1991

cc:

Director, Waterways Commission
Officer in Charge, Agriculture Department, Harvey
Groundwater Section, Water Authority, Perth



Mr L S Maiolo
c/- Post Office
DONNYBROOK WA 6239

Your ref:
Our ref: 68/88:51546
Enquiries: Mr C Sanders

Dear Mr Maiolo

**GROUNDWATER LICENCE APPLICATION, LOT 7 BUFFALO ROAD,
BINNINGUP**

Following my letter to you of 23 October in which I advised that the Environmental Protection Authority (EPA) would not support the granting of a well licence at Lot 7 Buffalo Road by the Water Authority, for the purposes of growing potatoes, I have had a number of discussions with your associate Mr V Lombardo.

It would appear from those conversations that you are not necessarily applying for a groundwater well licence. I further understand that you have approval from the Department of Agriculture for park land clearing of the property, and that you are receiving specialist advice from them on the management of horticulture. I understand also that you intend to use dam water for the irrigation of produce.

In this circumstance the EPA will not be commenting to the Water Authority about a groundwater licence, as you will not be proceeding with that application. However, I would appreciate confirmation of this from you at your convenience.

My earlier letter (23 October) had the purpose of pointing out the environmental problems that arise from extensive horticulture particularly potato growing, and our concerns are no less if dam irrigation is to be used. The EPA in withdrawing its intention to comment upon the well licence, strongly encourages you to consider the issue of maintaining the health of Leschenault Inlet through reducing to zero any possible nutrient discharges from your property. Also, please continue to consult the Agriculture Department for advice on irrigation efficiency and nutrient management.

Thank you

Yours sincerely

C C SANDERS
DIRECTOR
ENVIRONMENTAL INVESTIGATIONS DIVISION

31 October 1991

Environmental
Protection Authority

1 Mount Street Perth
Western Australia 6000
Telephone (09) 222 7000
Facsimile (09) 322 1598



Mr LS Maiolo
c/- Post Office
DONNYBROOK WA 6239

Your ref:
Our ref: 68/88
Enquiries: Mr Vaughn Cox

Dear Mr Miaolo

GROUNDWATER LICENCE APPLICATION, LOT 7 BUFFALO ROAD, BINNINGUP

The Water Authority of Western Australia has recently forwarded to this Authority details of your application for a groundwater well licence at Lot 7 Buffalo Road, Binningup.

I understand that your proposal is to use the groundwater allocation to grow potatoes, and that this is within the Parkfield Drain. As you are probably aware, this land forms part of the surface catchment of Leschenault Inlet.

The Environmental Protection Authority is most concerned at any proposals for intensive horticulture, such as potato growing, in the coastal plain catchment of the Leschenault Inlet. Intensive horticulture has been associated with the nutrient enrichment of many wetlands. Such nutrient enrichment encourages the growth of noxious algae, which then decay, killing many natural wetland species and reducing the recreational amenity of that waterway. This series of events is well known in the Peel-Harvey Estuary.

It is the Environmental Protection Authority's intention that the Leschenault Inlet should not suffer the same fate as the Peel-Harvey Estuary, and therefore does not approve of horticultural proposals in close proximity to the Leschenault Inlet.

I write to you to advise you of these matters and to make clear that Leschenault Inlet is extremely sensitive to increasing nutrient concentrations. Consequently, the EPA is likely to find proposals such as your own environmentally unacceptable, and will therefore recommend to the Water Authority that it not approve your application for a groundwater well licence.

Yours faithfully

C C Sanders
DIRECTOR
ENVIRONMENTAL INVESTIGATIONS DIVISION
23 October 1991

Minister for Conservation and the Environment,
Western Australia

30 APR 1982

HON MINISTER FOR LOCAL GOVERNMENT

Re: SYSTEM 6 REPORT - LESCHENAULT INLET

In reference to your request, 6 April, for comments on and a draft reply to the Acting Shire Clerk's letter dated 24 March.

I have noted the rezoning applications and the development proposal for Lot 7 Buffalo Road. With respect to the land subject to the Report's Recommendation C66.3, I advise that in reply to the same letter of Council's dated 24 March, the Director, Department of Conservation and Environment, stated that the Department supported Council's decision to oppose rezoning and new development on this land at least until the System 6 Study is finalised. I also advise that because the studies relevant to this area, namely the System 6 Study, the Bunbury Region Plan, and the Leschenault Inlet Management Authority's Draft Management Programme, have not been finalised, acquisition of the subject land by Government would be inappropriate at this stage.

I recommend that because these matters are of importance to the future of this area you should advise the Acting Shire Clerk of your support of Council's decision and also that it would be inappropriate for Government to purchase the subject land prior to the finalisation of the studies relevant to this land.

Jan Lawrence

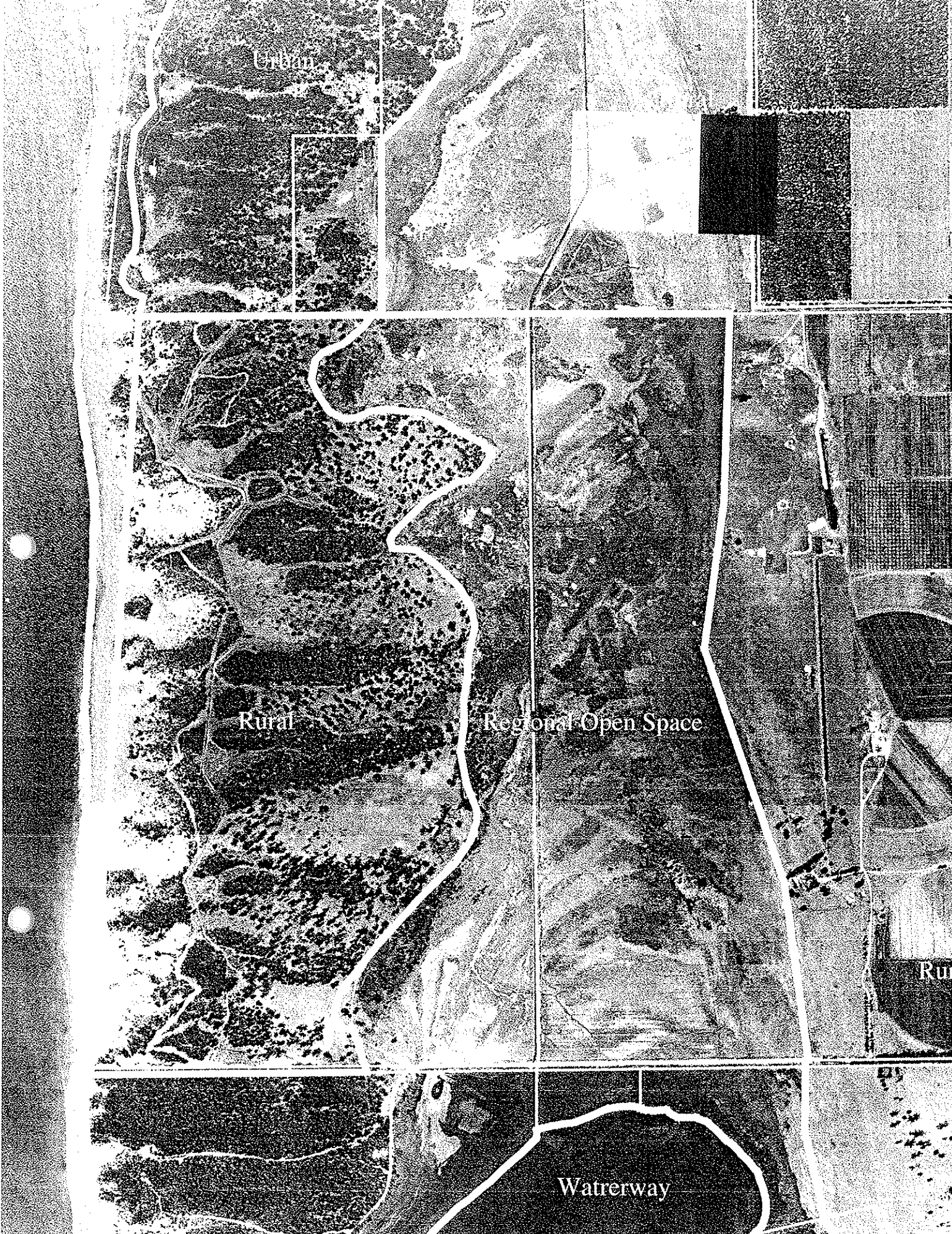
MINISTER FOR CONSERVATION & THE ENVIRONMENT

Director, Bx6. 30/4.

DEPARTMENT OF CONSERVATION AND ENVIRONMENT
3 MAY 1982
File No. <i>105/81</i>



Lot 7 Buffalo Rd.



**GREATER BUNBURY REGION SCHEME - ENVIRONMENTAL SUBMIS
BUFFALO ROAD**

LEGEND

Harwood Rd, Dalrymple.

GBSP - Parks recreation and Drainage

GBRS - Urban Deferred

Heddie - far C+S

Beard Medium woodland - tract

adj to C71

candowner ??

Within C60 Lot 7 Buf. Res

Quind. → Vass exist

Estuary

Coonawarra Nominees Pty Ltd

Shrublands: scrub heath