



WOODRIDGE WATER RESERVE WATER SOURCE PROTECTION PLAN

Woodridge Town Water Supply



WATER RESOURCE PROTECTION SERIES

WATER AND RIVERS COMMISSION REPORT WRP 7 1997



WATER AND RIVERS
COMMISSION



Government of **Western Australia**
Department of **Water**

Important information

The *Woodridge water source protection plan* (1997, WRP no.7) was reviewed in 2011.

Please ensure you read the *Woodridge drinking water source protection review* (2011, WRP no.121) alongside the 1997 plan to obtain all of the information about this drinking water source.

The 2011 review considers changes that have occurred in and around the Woodridge Water Reserve since the completion of the 1997 *Woodridge water source protection plan*. Additional recommendations have been prepared to ensure the ongoing protection of this public drinking water source area.

You can find the 2011 *Woodridge drinking water source protection review* at www.water.wa.gov.au > publications > find a publication > drinking water source protection reviews or by contacting the Department of Water on +61 8 6364 7600 or drinkingwater@water.wa.gov.au.

Woodridge Water Reserve
Water Source Protection Plan
Woodridge Town Water Supply

prepared by
John Bush

Water and Rivers Commission
Policy and Planning

WATER AND RIVERS COMMISSION
WATER RESOURCE PROTECTION SERIES
REPORT NO WRP 7



Acknowledgements

Contribution	Personnel	Title	Organisation
Supervision	David Boyd	Manager, Water Quality Protection	Water and Rivers Commission
Report Preparation (Draft)	David Holmes	Hydrogeologist	Water Authority of Western Australia
Report Preparation	John Bush	Consultant Environmental Scientist	Auswest Consultant Ecology Services
	Jade Coleman	Environmental Engineer	Water and Rivers Commission
Drafting	Dianne Abbott	Drafting Assistant	Water and Rivers Commission
Photography	John Bush	Consultant Environmental Scientist	Auswest Consultant Ecology Services

For more information contact:

Program Manager, Protection Planning
Water and Rivers Commission
3 Plain Street
EAST PERTH WA 6004

Ph: (08) 9278 0300
Fax: (08) 9278 0585

Reference Details

The recommended reference for this publication is:

Bush J 1997, Woodridge Water Reserve Water Source Protection Plan Woodridge Town Water Supply, Water and Rivers Commission, Water Resource Protection Series No WRP 7.

ISBN: 0-7309-7328-X
ISSN: 1326-7442

September, 1997



Executive Summary

About the Water Reserve

Woodridge Estate is a special rural subdivision located about five kilometres east of Guilderton in the Shire of Gingin, about 80 kilometres north of Perth. The public water supply is drawn from Water Corporation bores in the superficial aquifer within the Tamala Limestone.

The source has the potential to be contaminated from market gardens, septic tanks and a proposed service station, all of which are located up-gradient of the wellfield.

A Priority 3 source protection zone should be declared with wellhead protection zones around each production well. In addition, a monitoring program should be implemented to establish the long term trends in water quality.

About Water Source Protection Plans

Water Source Protection Plans establish the level of protection required within Water Reserves. The plans identify sources of contamination that should be investigated and set out programs for management of the resource.

The quality of water sources in country Western Australia is protected by proclaiming Water

Reserves under the Country Areas Water Supply Act (1947). The Act's by-laws enable the Water and Rivers Commission to control potentially polluting activities, to regulate land use, inspect premises and to take steps to prevent or clean up pollution.

The Water and Rivers Commission aims to work pro-actively with planning agencies to incorporate water protection in the land planning process. Decisions on land use zoning and subdivision applications have a significant impact on the protection of water sources. The Commission supports the amendment of Town Planning Schemes and Development Strategies that reflect land use compatible with Water Source Protection Plans.

This Water Source Protection Plan provides a basis for establishing compatible land uses within the Water Reserve at Woodridge and is a mechanism for practical implementation of the Commission's protection strategies. Local government decision makers, State planning authorities and operational staff are encouraged to recognise this document as a basis for ensuring the long term protection of this groundwater resource for generations to come.



Contents

EXECUTIVE SUMMARY	iii
1. INTRODUCTION.....	5
2. HYDROGEOLOGY.....	7
3. LAND USES -EXISTING AND PROPOSED	8
4. POTENTIAL FOR CONTAMINATION.....	8
5. PROPOSED PROCLAIMED AREA	10
RECOMMENDATIONS	12
IMPLEMENTATION STRATEGY	13
IMPLEMENTATION STRATEGY CONTINUED	14
REFERENCES	15
APPENDIX 1 : ACCEPTABILITY OF LAND USES WITHIN PUBLIC DRINKING WATER SOURCE AREAS	I



1. Introduction

Woodridge Estate is located about 80 kilometres north of Perth in the Shire of Gingin (see **Figure 1**). The public drinking water supply comes entirely from groundwater abstracted from a Water Corporation wellfield with bores screened in the unconfined limestone aquifer. This limestone is shallow, very porous and permeable. An aquifer of this type is recharged directly from rainfall and is vulnerable to contamination from inappropriate land uses.

The Woodridge wellfield is located about 1 kilometre west of the Wanneroo - Lancelin road

and comprises three production bores (1/79, 2/82 and 1/83), two unequipped production bores (1/82 and 3/82) and one abandoned production bore (Sandgate 2) (see **Figure 2**). The wells have been drilled to between 55 and 72 metres below ground level and screened over the bottom 8 to 12 metres (Harasymow, 1994).

The area has a temperate Mediterranean climate with hot dry summers and mild wet winters. The nearest rainfall recording station is at Yanchep 25 kilometres south where the annual recorded average is 756 millimetres (Harasymow, 1994).



Plate 1: The bores are located in an area surrounded by natural vegetation



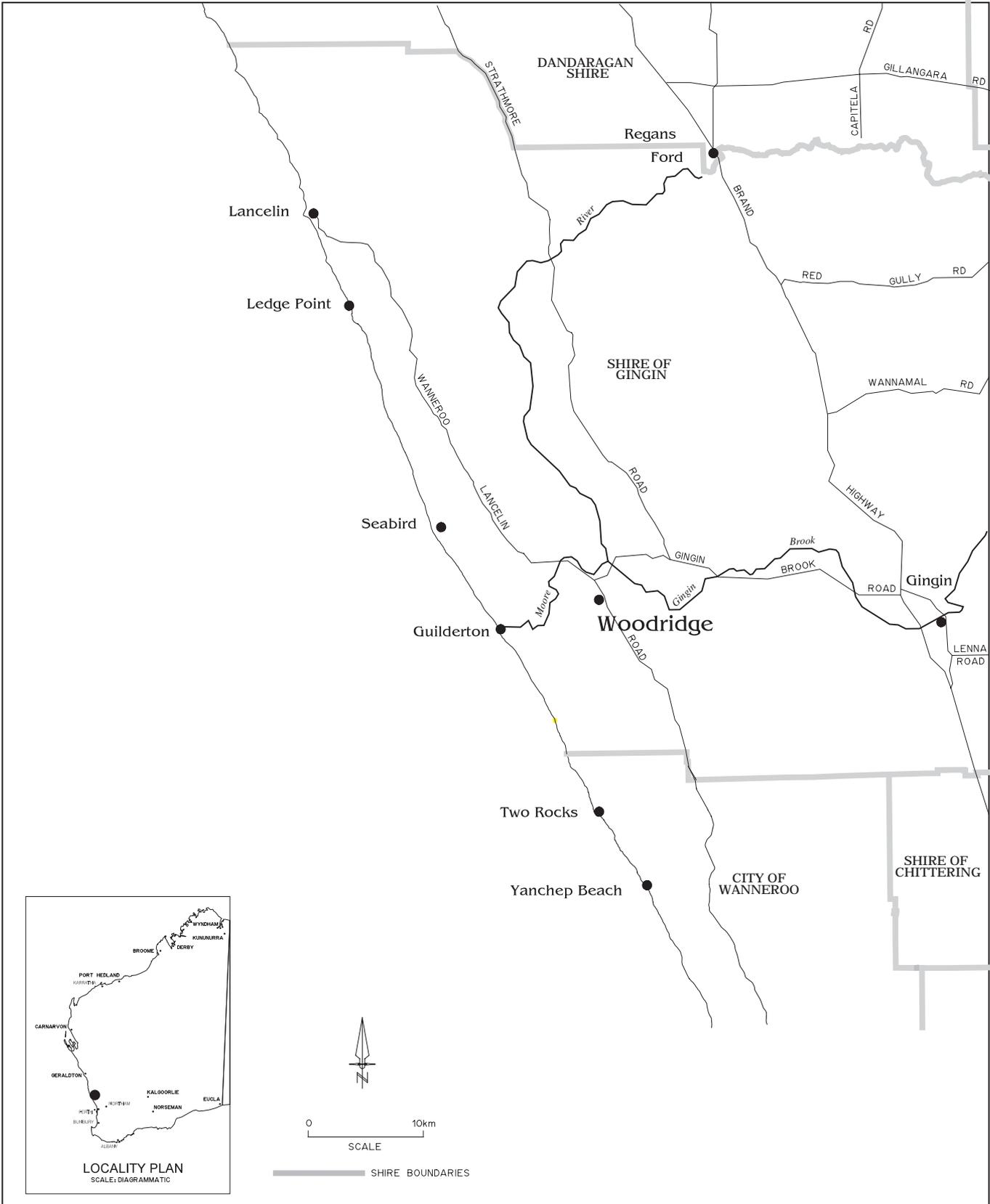


FIGURE 1. WOODRIDGE LOCALITY MAP



2. Hydrogeology

The Woodridge development is supplied from a shallow, unconfined aquifer in the Tamala Limestone which forms part of the superficial formations at the northern edge of the Gngangara Mound.

The aquifer is recharged by direct rainfall infiltration. The direction of groundwater flow is

westerly to north westerly eventually discharging into the ocean.

Water quality data indicates an increasing trend in nitrate concentrations in bores 2/82 and 1/83. Currently, the levels are well below drinking water quality guidelines, but should continue to be monitored to ensure drinking water criteria are not compromised.

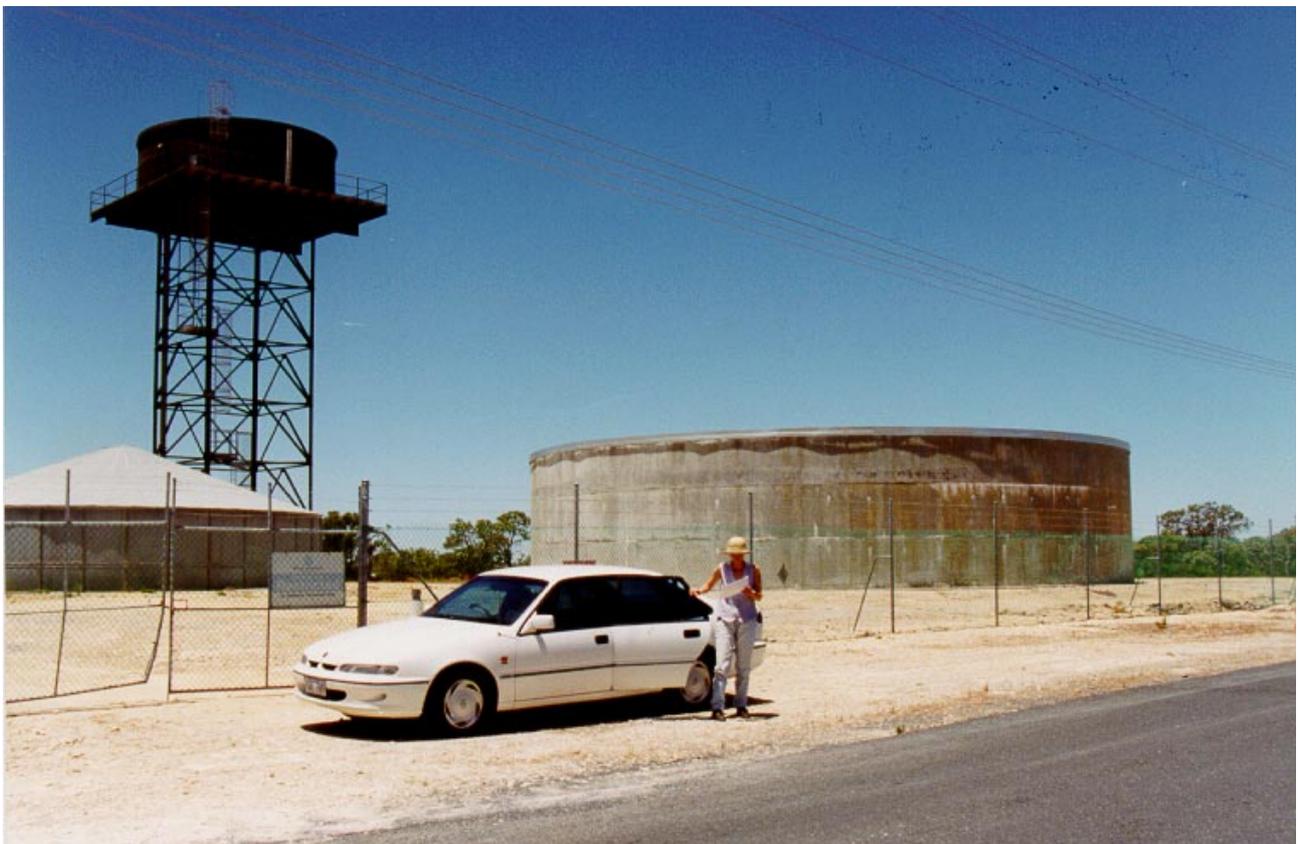


Plate 2: Groundwater is treated then held in elevated tanks prior to distribution.



3. Land Uses -Existing and Proposed

The Woodridge wellfield is located within the subdivision. The subdivision comprises lots of between about 2 and 5 hectares. Most of these residential lots are covered in native vegetation that has been generally left uncleared.

The area east of Woodridge forms part of the wellfield recharge area and includes a 16 lot subdivision zoned for horticulture in the Shire of Gingin local rural strategy. Currently only a few properties have been developed for horticulture (refer to **Figure 2**). These developments use significant quantities of water from private bores and at least one property stores and uses large quantities of poultry manures. Herbicides, fungicides, insecticides and growth regulators are used on the vegetable and flower crops.

Amendment No 28 of the Shire of Gingin Town Planning Scheme allows for the development of a Service Station at Lot 52 Croot Place (see **Figure 2**). However, no development application has been submitted to the Shire of Gingin at present.

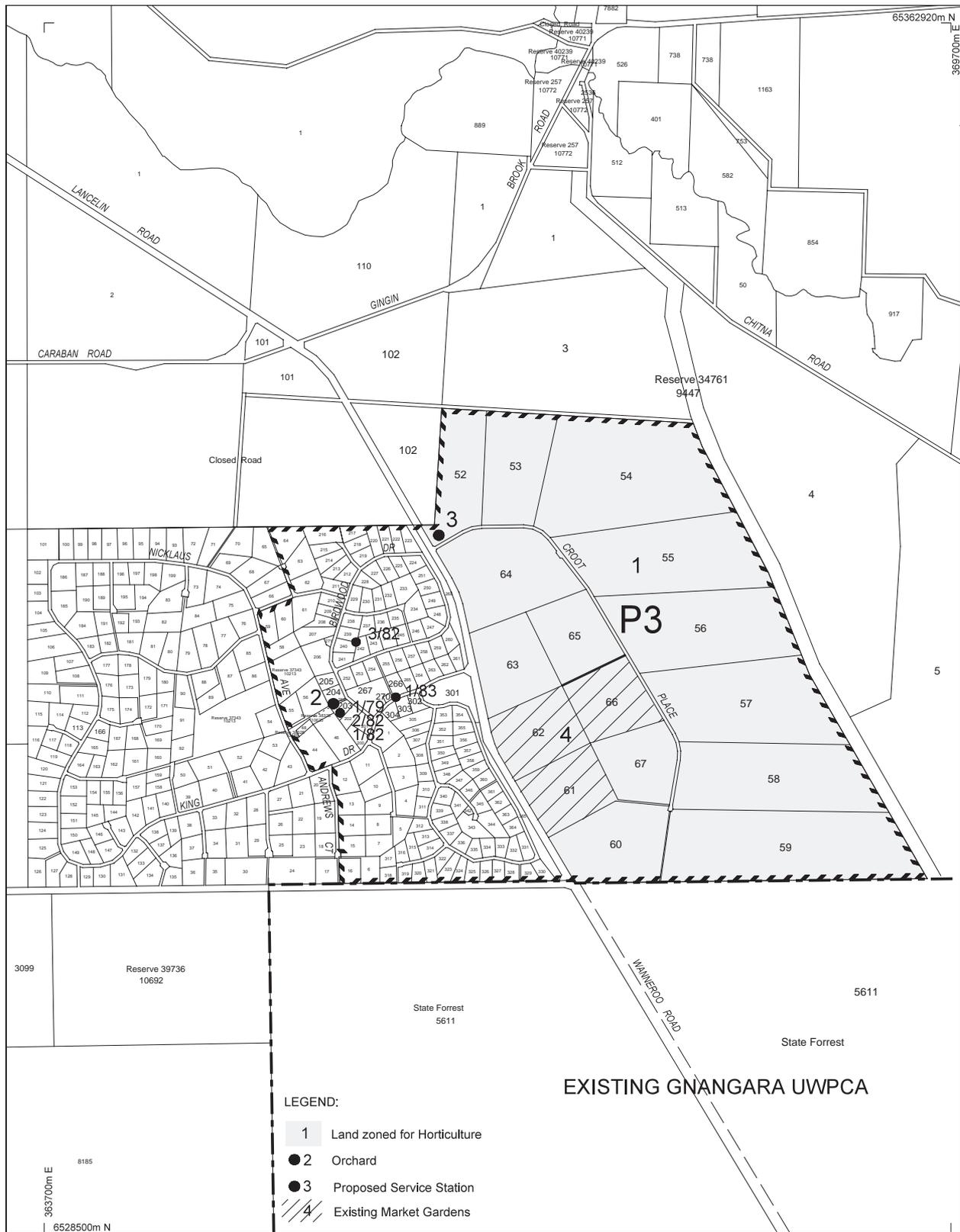
4. Potential For Contamination

There is potential for contamination of the Woodridge wellfield from the following existing land uses:

- septic tanks within the subdivision;
- nutrient leachate from up gradient horticulture industries;
- pesticide leachate from up gradient horticulture industries; and
- nutrient and pesticide use within the subdivision.

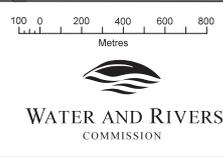
Other threats may be provided from land uses on as yet undeveloped blocks that form part of the subdivision to the east (up gradient) of Woodridge.





- LEGEND:**
- 1 Land zoned for Horticulture
 - 2 Orchard
 - 3 Proposed Service Station
 - ▨ 4 Existing Market Gardens

EXISTING GNANGARA UWPCA



- LEGEND:**
- Production Wells
 - ▨ Water Reserve Boundary



INDEX TO ADJOINING
1:100000
MAPS

1936	2036	2136
1935	2035	2135
2034	2134	

FIGURE 2.
**PROPOSED WOODRIDGE WATER RESERVE
POTENTIAL CONTAMINANT THREATS**

Drawn by N.J.A Date 13/06/97

Policy and Planning Division
Public Water Source Protection Section



5. Proposed Proclaimed Area

The proposed Woodridge Water Reserve covers the recharge area immediately up-gradient of the wellfield. The northern boundary runs west along the northern boundary of Lots 54, 53 and 52 Croot Place from the north-east corner of Lot 54 to the north-west corner of Lot 52. The boundary then runs south along the western boundary of Lot 52 to align with the northern boundary of Lot 223 Birdwood Drive. The boundary extends west again along the northern boundary of Lots 223-220, 217, 216 and 64 to the north-east corner of Lot 65. The western boundary runs south along the eastern boundaries of Lots 65, 67 and 66 to the north-west corner of Lot 61. From this point, the boundary runs west along the northern boundary of Lots 60 and 59 to the north-west corner of Lot 59. The boundary then extends south along the eastern side of Nicklaus Avenue to the south-west corner of Lot 44. The boundary then runs east along the northern side of King Drive to the intersection with Andrews Court. The boundary extends south along the eastern side of Andrews Court to the south-west corner of Lot 16. The southern boundary runs east along the southern boundary of Lots 16, 6, 318-321, 323-330, 60 and 59 to the south-east corner of Lot 59 and abuts the current northern boundary of the Gngara Underground Water Pollution Control Area (UWPCA). The eastern boundary extends north from this point along the western boundary

of Reserve 34761 to the north-west corner of Lot 54 Croot Place (see **Figure 3**).

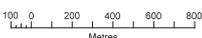
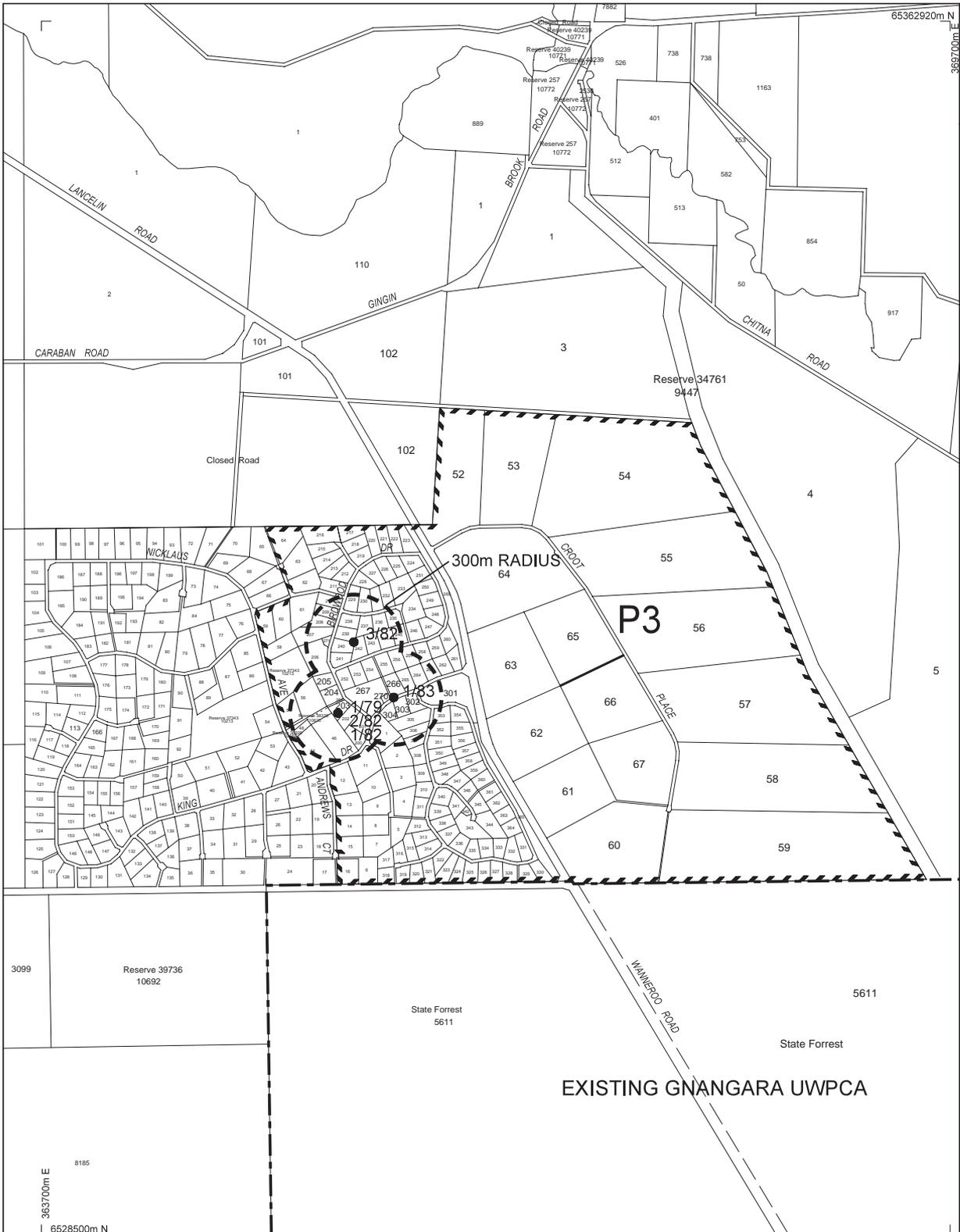
The eastern boundary of the Water Reserve extends to the topographical high ground in this area. This is approximately in a line with Croot Place. The recharge area for the wellfield may extend further to the east. Without additional data however, it is not possible to better define this boundary. The western boundary is about 300 metres from the wellfield. This is estimated to be a sufficient buffer zone to cover the down gradient capture zone of the wellfield.

The Water Reserve should be classified a Priority 3 source protection area (see **Appendix 1**) based on the following criteria:

- alternative economic water resources exist in the vicinity; and
- the area is zoned special rural and for intensive horticulture. The associated land use activities are acceptable in Priority 3 source protection areas. However, some restrictions may apply relating to the application of fertiliser or storage of fuels and chemicals.

Circular wellhead protection zones of 300 metres radius should be established around each production well.





LEGEND:

- Production Wells
- ▨ Water Reserve Boundary
- ▬ Wellhead Protection Zone



INDEX TO ADJOINING 1:100000 MAPS		
1936	2036	2136
1935	2035	2135
2034	2134	

FIGURE 3.
PROPOSED WOODRIDGE WATER RESERVE

Drawn by	N.J.A	Date	13/06/97
Policy and Planning Division Public Water Source Protection Section			



Recommendations

1. The proposed Woodridge Water Reserve should be gazetted.
2. Priority 3 classification management principles and the Public Water Source Protection's *Acceptability of Land Use Within Public Drinking Water Source Areas* should be incorporated into the local land planning strategies.
3. All development proposals in the Water Reserve which are likely to impact on water quality should be referred to the Water and Rivers Commission.
4. Signs should be erected aimed at protecting the Water Reserve. The signage should define the Water Reserve and ensure public awareness of the need to protect water quality.
5. The Shire of Gingin, in conjunction with the local emergency services, should become familiar with procedures detailed in the Western Australian Hazardous Materials Emergency Management Scheme (WAHMEMS) manual in order to address any spillage of pollutants within the Water Reserve. Personnel who are designated to respond to any WAHMEMS request should be aware of the location of the Water Reserve and have an understanding of the procedures that should be employed in the event of a spill which may threaten a water supply.
6. A surveillance program should be established to identify any non conforming land uses or potential contamination threats within the Water Reserve.
7. Nutrient levels in the Water Corporation production bores should be monitored to ensure drinking water quality criteria are not compromised.
8. Implementation of these recommendations should be reviewed one year after this plan is endorsed. A full review of this protection plan should be undertaken approximately every five years.



Implementation Strategy

No.	Description	Implemented by	Timing
1	Gazettal of Water Reserve.	<ul style="list-style-type: none"> Program Manager, Protection Planning (WRC). 	<ul style="list-style-type: none"> 1997/98.
2	Incorporation into land planning strategies.	<ul style="list-style-type: none"> Shire of Gingin. 	<ul style="list-style-type: none"> ongoing.
3	Referral of development proposals: <ul style="list-style-type: none"> WRC to provide the Shire of Gingin with guidelines for referral of development proposals. referral of development proposals. 	<ul style="list-style-type: none"> Program Manager, Protection Planning (WRC) Shire of Gingin, Ministry for Planning and Department of Environmental Protection. 	<ul style="list-style-type: none"> 1997/98. ongoing.
4	Erection of signs: <ul style="list-style-type: none"> development of guidelines for signage. determine number and location of signs required. erect signs. 	<ul style="list-style-type: none"> Program Manager, Protection Planning (WRC). Regional Manager, Mid West-Avon Region (WRC) in consultation with WC. Regional Manager, Mid West-Avon Region (WRC). 	<ul style="list-style-type: none"> 1997/98. 1997/98. 1998/99.
5	Emergency response: <ul style="list-style-type: none"> develop response plan. inform WAHMEMS personnel of special requirements for the Woodridge Water Reserve. 	<ul style="list-style-type: none"> Project Manager, Regional Support Branch (WRC). Project Manager, Regional Support Branch (WRC). 	<ul style="list-style-type: none"> 1997/98. 1997/98.
6	Surveillance program: <ul style="list-style-type: none"> develop guidelines for the surveillance of Water Reserves. implement the surveillance program. 	<ul style="list-style-type: none"> Program Manager, Protection Planning (WRC). Regional Manager, Mid West-Avon Region (WRC). 	<ul style="list-style-type: none"> 1997/98. on completion of surveillance guidelines.



Implementation Strategy continued

7	Monitoring program: <ul style="list-style-type: none">• monitor production wells 6 monthly for nutrients in addition to the standard program.• incorporate monitoring requirements as conditions on groundwater well licence.	<ul style="list-style-type: none">• Water Corporation.• Manager, Water Allocation (WRC).	<ul style="list-style-type: none">• 1997/98.• 1997/98.
8	Review of this plan and recommendations.	<ul style="list-style-type: none">• Water Quality Protection Branch (WRC).	Initial review-1998/99. Full review - 2002/03.



References

Harasymow, Roman (1994) *Groundwater Scheme Review - Woodridge*, Report No. WG 192, June 1994. Water Authority of Western Australia, Groundwater and Environment Branch.

Holmes, David (1995) *Groundwater Protection Plans for the Shires of Dandaragan, Gingin, Moora and Victoria Plains - Goldfields and Agricultural Region*. Report No. WG 203. WAWA - Groundwater and Environment Branch. Draft, June 1995.

Holmes, David (1995) *Protection of Groundwater Resources Used for Drinking Water Supplies in Country Areas of Western Australia (Country Areas Groundwater Protection Policy)*.

Water Authority of Western Australia - Groundwater and Environment Branch. Draft, June 1995.

Mappin Majoram, (1992) *Development Strategy and Structure Plan for the Gingin Coastal Region*, Shire of Gingin.

Mappin Majoram, (1995) *Local Rural Strategy*, Shire of Gingin.

Water Authority of Western Australia, *Gingin Groundwater Area Management Plan*, Report No. WG 160, October 1993.



Appendix 1 : Acceptability of Land Uses Within Public Drinking Water Source Areas

OVERVIEW OF PROTECTION FRAMEWORK

The Water and Rivers Commission is responsible for managing and protecting Western Australia's water resources. The Commission has developed policies for the protection of public drinking water source areas which are based on three levels of priority classification.

Priority 1 (P1) source protection areas are defined to ensure that there is no degradation of the water source. P1 areas are declared over land where the provision of the highest quality public drinking water is the prime beneficial land use. P1 areas would typically include land under Crown ownership. P1 areas are managed in accordance with the principle of risk avoidance and so development is generally not permitted.

Priority 2 (P2) source protection areas are defined to ensure that there is no increased risk of pollution to the water source. P2 areas are declared over land where low intensity development (such as rural) already exists. Provision of public water supply is a high priority in these areas. P2 areas are managed in accordance with the principle of risk minimisation and so some development is allowed under specific guidelines.

Priority 3 (P3) source protection areas are defined to minimise the risk of pollution to the water source. P3 areas are declared over land where water supply needs co-exist with other land uses such as residential, commercial and light industrial developments. Protection of P3 areas is achieved through management guidelines rather than restrictions on land use. If the water source does become contaminated, then water may need to be treated or an alternative water source be found.

In addition to priority classification, **wellhead protection zones** and **reservoir protection zones** are defined to protect the water source from contamination in the immediate vicinity of production wells and reservoirs. Wellhead protection zones are usually circular, with a radius of 500 metres in P1 areas and 300 metres in P2 and P3 areas. Reservoir protection zones usually consist of a 2 kilometre area around the top water level of a reservoir and includes the reservoir itself. These zones do not extend outside water reserves. Additional restrictions apply within these zones.

LAND USE COMPATIBILITY TABLE

This table is to be used as a guideline only. Further information relating to land use and developments within Public Drinking Water Source Areas including those not listed in the table can be obtained from the Commission.

This table does not replace the need for assessment by the Commission. Please consult the Commission regarding any land use proposals in Public Drinking Water Source Areas which may impact on water resources.



DEFINITIONS USED IN THE TABLE

<i>Compatible</i>	The development/land use is compatible with the management objectives of the priority classification.
<i>Incompatible</i>	The development/land use is incompatible with the management objectives of the priority classification.
<i>Restricted</i>	The development/land use may be compatible with the management objectives of the priority classification with appropriate site management practices. Restricted activities should be referred to the Commission for assessment on a case specific basis.
<i>Extensive</i>	Where limited additional inputs are required to the land to support the desired land use. eg supplementary feed in drought etc.
<i>Intensive</i>	Where regular additional inputs are required to support the desired land use. eg irrigation, additional feed, fertilisers.

AGRICULTURE - ANIMALS

Development	Priority 1	Priority 2	Priority 3
Apiary	Restricted	Restricted	Restricted
Aquaculture eg. marron farm, trout farm etc	Incompatible	Restricted	Restricted
Dairy Farming	Incompatible	Restricted	Restricted
Feedlots	Incompatible	Incompatible	Restricted
Livestock grazing (extensive)	Restricted	Compatible	Compatible
Livestock grazing (intensive)	Incompatible	Incompatible	Compatible
Piggery	Incompatible	Incompatible	Incompatible
Poultry farming (housed)	Incompatible	Restricted	Restricted
Stables	Incompatible	Restricted	Compatible
Stockholding and saleyards	Incompatible	Incompatible ⁷	Restricted ⁷

AGRICULTURE - PLANTS

Development	Priority 1	Priority 2	Priority 3
Broad acre cropping i.e. non-irrigated	Restricted	Compatible	Compatible
Floriculture (extensive)	Incompatible	Restricted	Compatible
Floriculture (intensive)	Incompatible	Incompatible	Restricted
Horticulture	Incompatible	Incompatible	Restricted
Hydroponic Horticulture	Incompatible	Restricted	Restricted
Orcharding	Incompatible	Restricted	Compatible
Potted Nurseries	Incompatible	Restricted	Compatible
Silviculture	Restricted	Restricted	Compatible
Turf Farms	Incompatible	Incompatible	Restricted
Viticulture	Incompatible	Restricted	Compatible



DEVELOPMENT - COMMERCIAL

Development	Priority 1	Priority 2	Priority 3
Aircraft Servicing	Incompatible	Incompatible	Restricted ⁶
Amusement Centre	Incompatible	Incompatible	Compatible ⁶
Automotive business	Incompatible	Incompatible	Restricted ⁶
Boat Servicing	Incompatible	Incompatible	Restricted ⁶
Caravan and trailer hire	Incompatible	Incompatible	Restricted ⁶
Carpark	Incompatible	Incompatible	Compatible
Consulting rooms	Incompatible	Incompatible ⁷	Compatible ⁶
Cottage Industries	Restricted	Incompatible ⁷	Compatible
Drive in take-away food shop	Incompatible	Incompatible	Compatible ⁶
Drive in theatre	Incompatible	Incompatible	Compatible ⁶
Dry Cleaning Premises	Incompatible	Incompatible	Restricted ⁶
Farm supply centre	Incompatible	Incompatible ⁷	Restricted
Fuel depot	Incompatible	Incompatible	Restricted
Garden Centre	Incompatible	Incompatible	Compatible
Local shop	Incompatible	Incompatible ⁷	Compatible
Market	Incompatible	Incompatible	Compatible ⁶
Milk depot	Incompatible	Incompatible	Restricted
Restaurant	Incompatible	Incompatible	Compatible
Service Station	Incompatible	Incompatible	Restricted
Transport Depot	Incompatible	Incompatible	Restricted
Veterinary Clinic/hospital	Incompatible	Incompatible ⁷	Restricted
Wrecking vehicles and machinery	Incompatible	Incompatible	Restricted

DEVELOPMENT - INDUSTRIAL

Development	Priority 1	Priority 2	Priority 3
General Industry	Incompatible	Incompatible	Restricted ⁶
Heavy Industry	Incompatible	Incompatible	Incompatible
Light Industry	Incompatible	Incompatible	Restricted ⁶
Power Stations	Incompatible	Incompatible	Incompatible



DEVELOPMENT - URBAN

Development	Priority 1	Priority 2	Priority 3
Aged and dependent persons accommodation	Incompatible	Incompatible	Compatible ⁶
Amenity building	Incompatible	Restricted	Compatible
Airports or landing grounds	Incompatible	Incompatible	Restricted ⁶
Cemetery	Incompatible	Incompatible	Restricted
Civic building	Incompatible	Restricted	Compatible ⁶
Club	Restricted	Restricted	Compatible ⁶
Community hall	Restricted	Restricted	Compatible
Family Day Care Centre	Incompatible	Restricted	Compatible ⁶
Funeral parlour	Incompatible	Incompatible	Compatible ⁶
Health Centre	Incompatible	Incompatible	Compatible ⁶
Hospital	Incompatible	Incompatible	Restricted ⁶
Medical centre	Incompatible	Incompatible	Compatible ⁶

EDUCATION/RESEARCH

Development	Priority 1	Priority 2	Priority 3
Education Centres	Restricted	Restricted	Compatible ⁶
Primary/Secondary Schools	Incompatible	Incompatible	Compatible ⁶
Scientific Research	Restricted	Restricted	Compatible
Universities	Incompatible	Incompatible	Restricted ⁶

MINING AND MINERAL PROCESSING

Development	Priority 1	Priority 2	Priority 3
Extractive Industries	Restricted ²	Restricted ²	Restricted ²
Mining/Mineral Exploration	Restricted ⁴	Restricted ⁴	Restricted ⁴
Tailings Dams	Incompatible	Incompatible	Restricted

PROCESSING OF ANIMALS/ANIMAL PRODUCTS

Development	Priority 1	Priority 2	Priority 3
Abattoirs	Incompatible	Incompatible	Incompatible
Cheese/butter factory	Incompatible	Incompatible	Restricted
Composting (using sewage sludge and animal products)	Incompatible	Incompatible	Restricted
Fish Processing	Incompatible	Incompatible	Incompatible
Tannery	Incompatible	Incompatible	Incompatible
Woolscourer	Incompatible	Incompatible	Incompatible



PROCESSING OF PLANTS/PLANT PRODUCTS

Development	Priority 1	Priority 2	Priority 3
Breweries	Incompatible	Incompatible	Restricted
Composting (not using sewage sludge or animal products)	Incompatible	Restricted	Restricted
Vegetable/food processing	Incompatible	Incompatible	Restricted
Wineries	Incompatible	Incompatible	Restricted

SUBDIVISION

Subdivision of land to lots of any size is incompatible within Priority 1 areas.

Development	Priority 1	Priority 2	Priority 3
Kenel Subdivisions	Incompatible	Restricted	Restricted
Rural with a minimum lot size of 4 ha (unsewered)	Incompatible	Compatible	Compatible
Rural with a minimum lot size of 1 ha (unsewered)	Incompatible	Incompatible	Compatible
Special rural with a minimum lot size of 2 ha (unsewered) ⁵	Incompatible	Restricted ⁸	Restricted ⁸
Special rural with a minimum lot size of 1 ha (unsewered) ⁵	Incompatible	Incompatible	Restricted ⁸
Urban Residential	Incompatible	Incompatible	Compatible ⁶

SPORT AND RECREATION

Development	Priority 1	Priority 2	Priority 3
Equestrian Centre	Incompatible	Incompatible	Compatible
Golf Courses	Incompatible	Incompatible	Restricted
Irrigated Recreational Parks	Incompatible	Restricted	Restricted
Motor sports i.e permanent racing facilities	Incompatible	Incompatible	Restricted
Public Swimming Pools	Incompatible	Restricted	Restricted
Rifle Ranges	Restricted	Restricted	Compatible
Temporary recreational activities (active) eg four wheel driving, rallies	Incompatible	Restricted ³	Restricted ³
Temporary recreational activities (passive) eg. horse riding, bush walking	Restricted	Restricted	Restricted

STORAGE OF DESIGNATED SUBSTANCES

Development	Priority 1	Priority 2	Priority 3
Above ground storage of designated substances	Restricted ⁷	Restricted ⁷	Restricted ⁷
Bulk Chemical Storage Facility	Incompatible	Incompatible	Incompatible
Underground Storage Tanks	Incompatible	Incompatible	Restricted



TOURISM ACCOMMODATION

Development	Priority 1	Priority 2	Priority 3
Bed and Breakfast	Incompatible	Restricted	Compatible
Caravan Parks	Incompatible	Incompatible	Restricted ⁶
Holiday accommodation eg farm chalets	Incompatible	Restricted ⁹	Compatible ⁶
Motel lodging house, hostels	Incompatible	Incompatible	Compatible ⁶

WASTE TREATMENT AND MANAGEMENT

Development	Priority 1	Priority 2	Priority 3
Deep well injection of effluent	Incompatible	Incompatible	Incompatible
Municipal Landfills	Incompatible	Incompatible	Restricted
Recycling depot	Incompatible	Incompatible	Restricted
Refuse transfer stations	Incompatible	Incompatible	Restricted
Sewers	Incompatible	Restricted	Acceptable
Used Tyre Storage Facility	Incompatible	Incompatible	Incompatible
Wastewater Treatment Plants	Incompatible	Incompatible	Restricted
Water Treatment Plants	Restricted	Restricted	Restricted

OTHER DEVELOPMENTS

Development	Priority 1	Priority 2	Priority 3
Caretakers house	Restricted	Restricted	Compatible
Construction Projects	Restricted	Restricted	Restricted
Forestry	Restricted ¹	Compatible	Compatible
National Parks	Compatible	Compatible	Compatible
Nature Reserves	Compatible	Compatible	Compatible
Radio and TV installation	Restricted	Restricted	Restricted
Major Transport Routes	Incompatible	Restricted ¹⁰	Compatible

1. Restrictions apply to fertiliser application rates with strict controls on the application of pesticides and field operations.
2. Restrictions apply to the storage of fuels and chemicals with strict guidelines for rehabilitation.
3. Restrictions on the use of fuel and chemicals apply.
4. Subject to conditions placed on lease.
5. Special rural development requires appropriate planning justification including provisions in the town planning scheme text.
6. Must be connected to deep sewerage.
7. May be permitted if this use is incidental to the overall land use in the area and is consistent with planning strategies.
8. Restrictions apply to siting effluent disposal systems in areas with poor land capability and a shallow depth to groundwater.
9. Restrictions apply on density of accommodation.
10. Restrictions apply on road design and construction and the types of goods that may be carried.

June, 1997



