

PLANNING CATCHMENTS FOR OUR WATER FUTURE

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Central Highlands Water







PLANNING CATCHMENTS FOR OUR WATER FUTURE

- Responsibilities of Water Supply Authorities
- Consequences of failure to protect source water quality
- Land use planning as the key tool
- How the planning system can be used
- Important principles

Responsibilities of Water Supply Authorities

- Primary Responsibility
 - Provide safe drinking water
- Secondary Responsibility
 - Provide it reliability and at minimum cost

Consequences of Failure to Protect Catchments

- WALKERTON (2000)
- Contamination of shallow aquifer from cattle manure after heavy rain.
- Risk noted when bore was constructed (1978) and council advised to establish a water – protection area.
- 7 died, 27 with ongoing health problems, 2,300 ill
- Cost \$CAD 130m
 - *Source Hruday S & E, Safe Drinking Water, IWA Publishing*

Consequences of Failure to Protect Raw Water Supply

- MILWAUKEE (1993)
- Fully treated water supply
- Sewage effluent entered water treatment plant intake during heavy rain
- 4,400 people hospitalised
- 50-70 deaths (estimated)

– Source *Crudey S & E, Safe Drinking Water, IWA Publishing*

Consequences of Reliance on Monitoring for Public Health

- SYDNEY 1998
- Downgrading of catchment management and multiple barriers
- Reliance on treatment & monitoring for health protection
- Resignation of Chairman and MD
- Cost of \$30m to Sydney water
- Catchment management removed from Authority
- Loss of community's confidence in authority
 - *Source Hruday S & E, Safe Drinking Water, IWA Publishing*

Consequence of Failure to Protect Catchment

- Llyn Cwellyn (2005/06)
- Cryptosporidium outbreak – 231 cases
- Water System “Not considered at risk”
- UV Treatment installed
- Infected residents in catchment reported as possible source
- DWI recommended all surface sources be reviewed.
- *Source Health Stream March 2006*

LESSONS

- Waterborne disease outbreaks not limited to third world
- Failure usually occurs during extreme events
- Pathogens create the greatest risk to health
- Community unforgiving if put at risk
- Protection of source water vital
- Multiple barriers essential
- More development in catchments equals more pollution & higher risk

Advantages of Catchment Management

- Lowers risk at little cost
- Lowers treatment costs
- Simpler treatment plant
 - Northern city \$50m limited catchment management
 - Ballarat \$25m proactive catchment management
 - Based on risk assessment by BOOT proponents

MULTIPLE BARRIERS

BARRIERS

1. Source water (catchment) protection
2. Storage management (long detention times, protection from contamination)
3. Treatment
4. Disinfection
5. System management
6. Plumbing controls (cross connection control)

Catchment Risk

- Land Use Change (increasing urbanisation)
 - Slow & Incremental (not obvious, trends not recorded or measured)
 - Cumulative (No one development will put supply at risk)
 - Every applicant has a good reason
 - Politically difficult to control
 - Generally not successful to argue merit of individual cases
 - Need to have a catchment management policy within the regional Land Planning System

Managing Land Use

- Planning Controls
 - Unknown to most water authorities
 - Are designed to control incremental change
 - Can control both use & development of land
 - Are familiar to the community
 - Can prevent protracted arguments with owners if noted prior to purchase
 - Provide an opportunity to notify developers at the earliest possible stage

How not to use planning controls

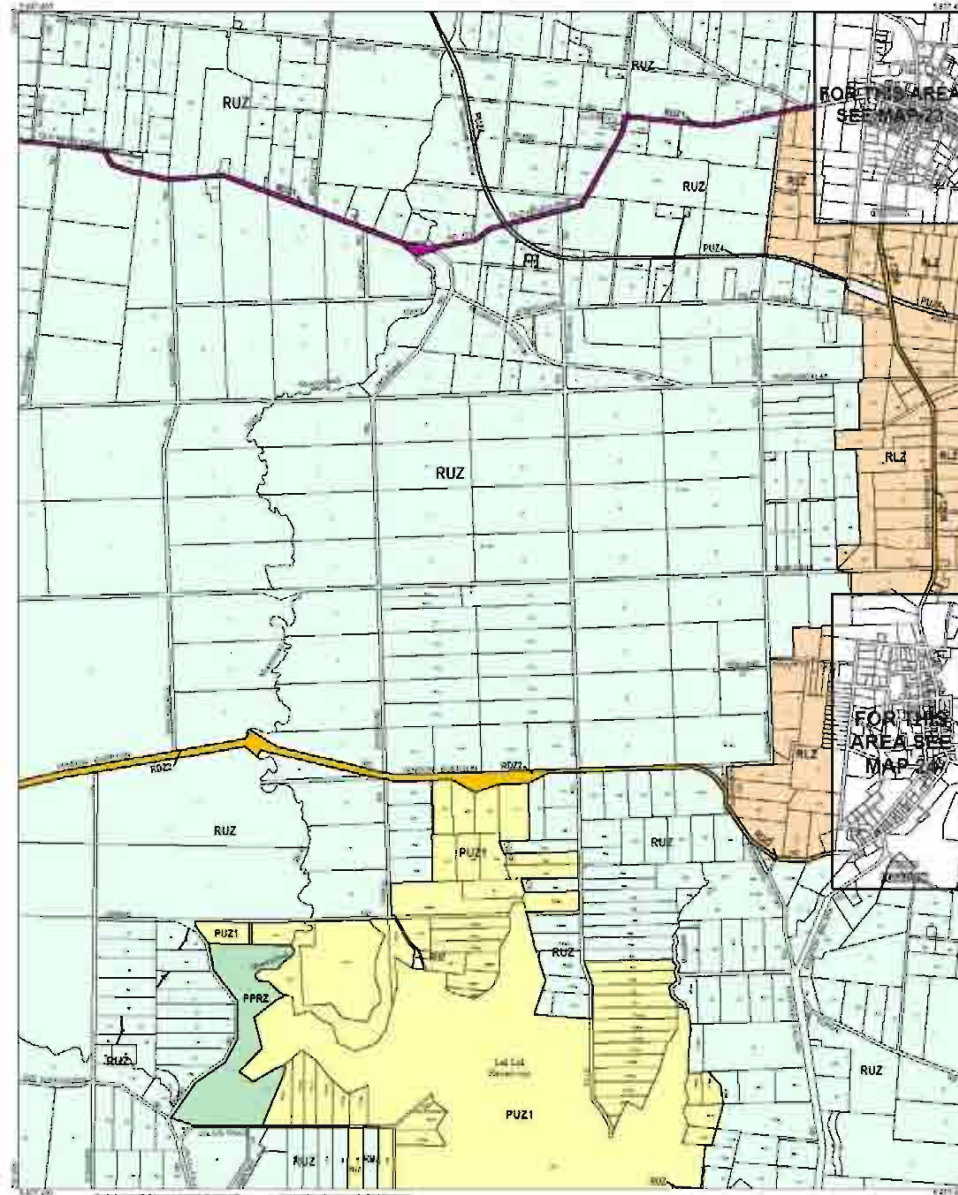
Example

- New house to replace an existing dwelling
- No objection by water authority
- But then subdivision to allow sale of old house
- Argued risk to catchment – NOT SUCCESSFUL
- Failed to understand the planning process

WHAT CAN BE ACHIEVED



MOORABOOL PLANNING SCHEME - LOCAL PROVISION



Color	Zone Name
Light Green	Rural Residential Zone (RUZ)
Yellow	Primary Urban Zone (PUZ1)
Light Blue	Public Purpose Residential Zone (PPRZ)
Orange	Rural Living Zone (RLZ)
Light Blue	Rural Residential Zone (RUZ1)
Dark Green	Public Purpose Residential Zone (PPRZ)
Dark Blue	Public Purpose Residential Zone (PPRZ)
Dark Green	Public Purpose Residential Zone (PPRZ)
Dark Green	Public Purpose Residential Zone (PPRZ)
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ZONES

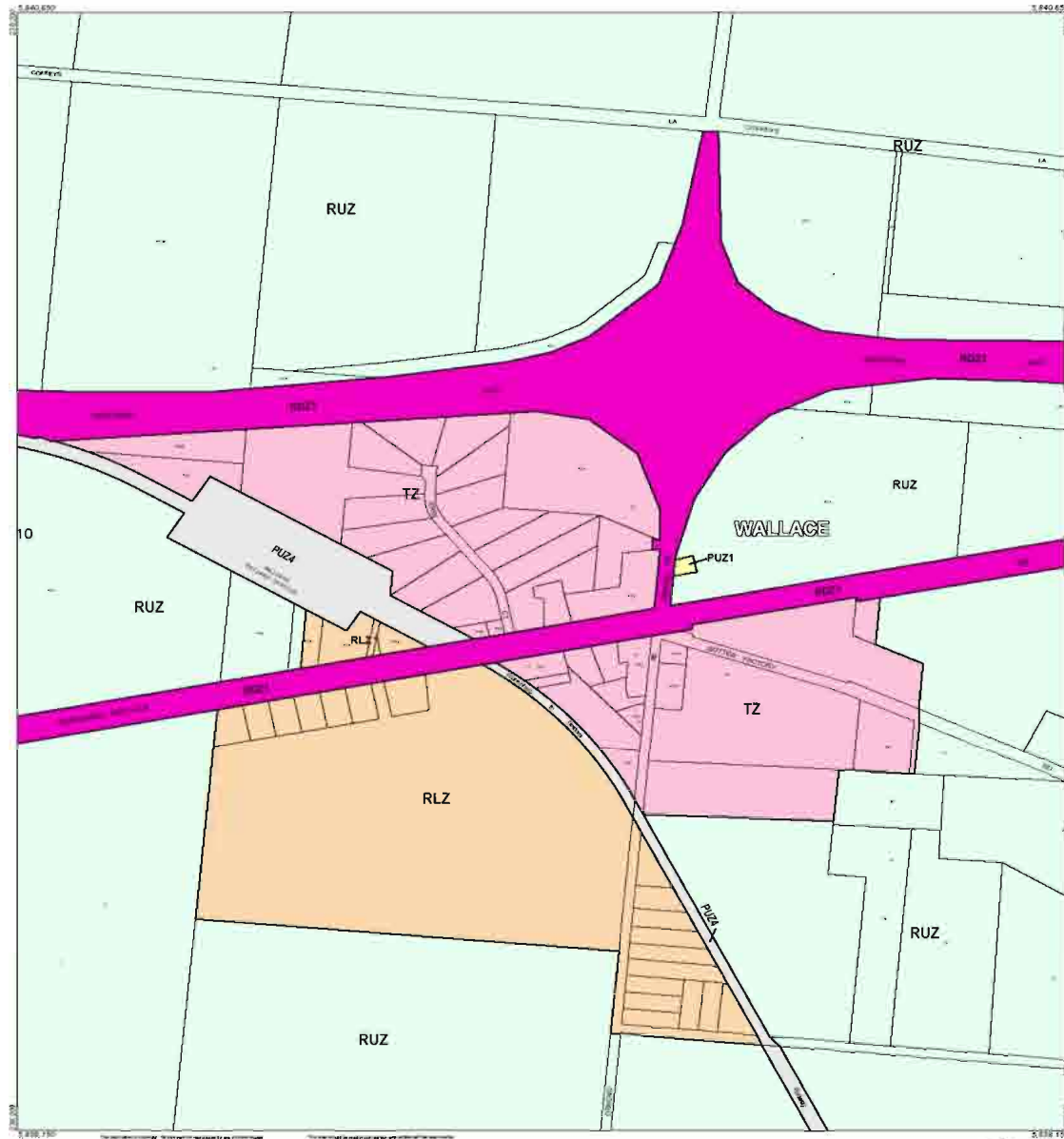


MAP No 20





MOORABOOL PLANNING SCHEME - LOCAL PROVISION



ZONES

RUZ	Residential Use Zone
RLZ	Residential Low Density Zone
TZ	Transition Zone
RUD	Residential Use Development Zone
PUZ1	Public Use Zone 1

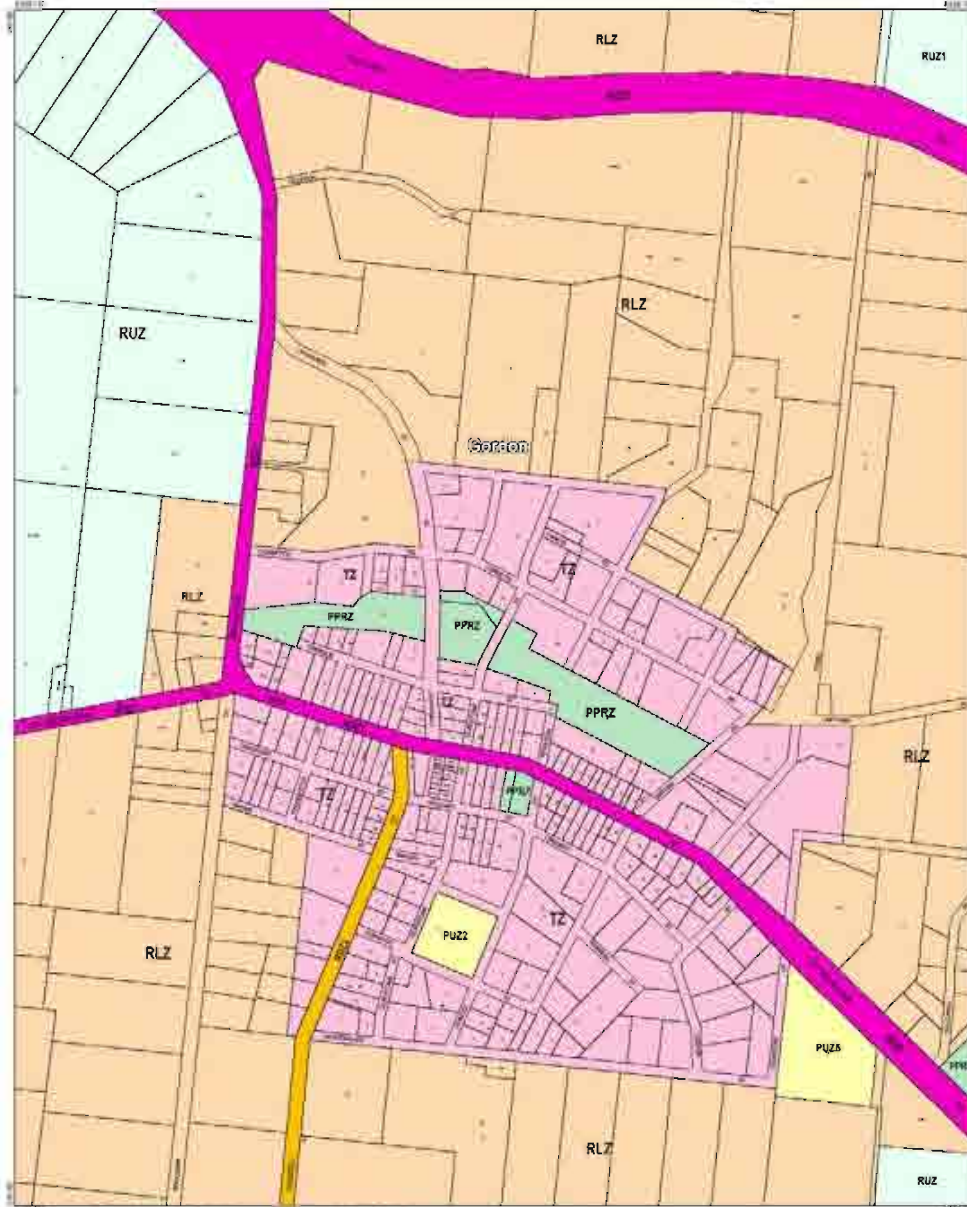
Australian Map Grid Zone 51

Scale: 1:5000

Map No 12

Victoria

MOORABOOL PLANNING SCHEME - LOCAL PROVISION



Color	Zone Name
Orange	RLZ
Light Blue	RUZ
Light Green	TZ
Dark Green	PPRZ
Yellow	PUZ2
Light Yellow	PUZ3

Scale bar: 0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000 meters.

North arrow and logos for Moorabool Shire Council and the Department of Planning and Infrastructure.

Inset map showing the location of the study area within the Moorabool Shire Council boundary.

MOORABOOL PLANNING SCHEME - LOCAL PROVISION



Symbol	Description
[Symbol]	[Description]
[Symbol]	[Description]
[Symbol]	[Description]

Scale bar: 0 100 200 METRES

North arrow

Logos: Moorabool Shire Council, VicGov

Inset map showing the location of the area within the Moorabool Planning Scheme.

SCHEDULE 1 TO THE ENVIRONMENTAL SIGNIFICANCE OVERLAY

Shown on the planning scheme map as **ESO 1**

PROCLAIMED WATER CATCHMENT AREAS

Statement of environmental significance

The Shire of Moorabool contains several proclaimed water catchments, which provide water to urban and rural development throughout the Shire. The protection of water catchments is essential to the health of all communities that rely on water for domestic and stock supply.

Environmental objective to be achieved

- To protect the quality and quantity of water produced within proclaimed water catchments.
- To provide for appropriate development of land within proclaimed water catchments.

Buildings and works

A permit is not required for:

- Repairs and routine maintenance and emergency works to existing buildings and works.
- The construction of a dam under 3ML capacity that is not on a waterway.
- The construction or carrying out of works associated with a minor utility installation.
- The construction or carrying out of works associated with informal outdoor recreation.

Summary

- Land use planning is vital
- Gain high level support
- Be proactive
- Influence and develop policy
- Train staff in planning principles
- Base arguments on planning principles and policy not individual cases & be consistent
- Build good relationships with local planning and health staff in Council
- Keep good accessible records

WATER AUTHORITIES ARE HELD ACCOUNTABLE FOR THE SAFETY OF THEIR SUPPLY

Accept the responsibility

BECAUSE NOBODY WILL LOOK
AFTER YOUR INTERESTS LIKE
YOU WILL