

RED DOT DECISION SUMMARY

The practice of VCAT is to designate cases of interest as 'Red Dot Decisions'. A summary is published and the reasons why the decision is of interest or significance are identified. The full text of the decision follows. This Red Dot Summary does not form part of the decision or reasons for decision.

VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

ADMINISTRATIVE DIVISION

PLANNING AND ENVIRONMENT LIST

VCAT REFERENCE NO. P86/2006

IN THE MATTER OF

Maurice and Esther Rozen v Macedon Ranges
Shire Council

BEFORE

Helen Gibson, Deputy President
Peter O'Leary, Member
Graeme David, Member

NATURE OF CASE	Application of the precautionary principle when considering a proposal to construct dwellings in an open potable water catchment.
POTENTIAL GUIDELINE DECISION	Yes
REASONS WHY DECISION IS OF INTEREST OR SIGNIFICANCE	
LAW – issue of interpretation or application	Interpretation and application of the precautionary principle
POLICY – interpretation or application of policy	Planning policy relating to the protection of water supply catchments – consideration of <i>Guidelines: planning permit applications in open, potable water catchments (May 2009)</i> – consideration of the <i>Australian Drinking Water Guidelines</i> – planning policy relating to rural/agricultural issues and land management practice

SUMMARY

This case concerned an application for four dwellings on four allotments, having an average size of 18 hectares each, in an open, potable water supply catchment. The Tribunal initially granted a permit. This decision was overturned by the Supreme Court on the basis that the Tribunal had misstated and misapplied the precautionary principle in circumstances where it was plainly relevant and the Tribunal was required to consider the question of cumulative risk created by otherwise individually appropriate septic tank systems.

We consider the meaning of the precautionary principle and the assessment of cumulative risk in the context of the recent *Guidelines: planning permit applications in open, potable water supply catchments (May 2009)* (the current Guidelines) and the *Australian Drinking Water Guidelines*.

In terms of the guideline regarding a dwelling density of 1:40ha in the current Guidelines, we consider that planning permit applications in open potable water supply catchments should be determined by reference to the policy in the current Guidelines; that each of the individual guidelines should be applied cumulatively; and that the current Guidelines should take priority over competing policy objectives or decision guidelines in the planning scheme in the event of a conflict. We endorse guiding principle 1 of the *Australian Drinking Water Guidelines* that protection of water sources is of paramount importance and must never be compromised.

Overall, we conclude that in the interests of net community benefit and sustainable development, a permit for only one dwelling should be granted.

VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

ADMINISTRATIVE DIVISION

PLANNING AND ENVIRONMENT LIST

VCAT REFERENCE NO.P86/2006
PERMIT APPLICATION NO.P2003 - 0011

CATCHWORDS

Precautionary principle – Guidelines: planning permits in open, potable water catchments – cumulative risk – operation of septic tank –waste water treatment systems – human presence in catchments – planning policy applicable to water catchments – rural agricultural issues and land management practice.

APPLICANT	Maurice and Esther Rozen
RESPONSIBLE AUTHORITY	Macedon Ranges Shire Council
RESPONDENTS	Western Water
SUBJECT LAND	863 Ashbourne Road Woodend
WHERE HELD	Melbourne
BEFORE	Helen Gibson, Deputy President Peter O’Leary, Member Graeme David, Member
HEARING TYPE	Hearing
DATES OF HEARING	3, 4, 5, and 6 August 2009
DATE OF ORDER	23 December 2009
CITATION	Rozen v Macedon Ranges SC (includes Summary) (Red Dot) [2009] VCAT 2746

ORDER

- 1 Pursuant to section 127 and clause 64 of schedule 1 of the *Victorian Civil & Administrative Tribunal Act* 1998, the following plans are substituted for the plans submitted with the permit application:
 - Prepared by: Tomkinson
 - Dated: 22 January 2007
 - Drawing numbers: CA111L Version B – Ashbourne Road
CA111L1 Version B – Ashbourne Road
CA111Q5 Version B – Ashbourne Road
CA111P Version B – Chambers Road
- 2 The decision of the Responsible Authority is set aside.

3 In permit application P203-0011 a permit is granted and directed to be issued for the land at 863 Ashbourne Road, Woodend in accordance with the endorsed plans and on the conditions set out in Appendix A. The permit allows:

- Use and development of one dwelling and associated works.

Helen Gibson
Deputy President

Peter O’Leary
Member

Graeme David
Member

INFORMATION

Description of Proposal	Use and development for four dwellings, one on each of the four allotments
Nature of Application	Section 77 of the <i>Planning and Environment Act 1987</i>
Zone and Overlays	Rural Conservation Zone – Schedule 1 (RCZ1) Environmental Significance Overlay – Schedule 4 Eppalock Proclaimed Catchment (ESO4) Vegetation Protection Overlay – Schedule 9 (VP09)
Permit triggers	Cl. 35.06-1 – Use for a dwelling Cl. 35.06-5 – Development of dwelling Cl. 42.01-2 – Construct a building
Land description	Four crown allotments: CA111L (lot ‘A’) – 15.45 ha CA111L1 (lot ‘B’) – 16.11 ha CA111Q5 (lot ‘C’) – 16.71 ha CA111P (lot ‘D’) – 24.08 ha Total area – 72.35 ha <p>The site is within a rural landscape located along Ashbourne Road near the hamlet of Ashbourne about 7km southwest of Woodend. The land is irregular in shape. It abuts Ashbourne Road and Chambers Road. The Campaspe River forms the south western and western boundary. Three of the lots have a frontage to the river.</p> <p>It is mainly cleared grazing land with a few patches of remnant native vegetation particularly close to the Chambers Road side of the site.</p> <p>The site forms part of the Campaspe River Catchment Area which is a sub-catchment of the larger Eppalock Water Supply Catchment. The Campaspe River drains into the Campaspe Reservoir, which is located downstream from the site and supplies the Township of Woodend.</p>
Inspection	Inspections of the site and surrounding areas were undertaken by the Tribunal following the hearing.

APPEARANCES

For Applicant

Mr Nicholas Tweedie of counsel, instructed by Best Hooper. Mr Tweedie called evidence from:

- Mr Paul Williams, Engineering Geologist/ Hydrologist
- Mr Robert van de Graaff, Hydrologist
- Mr Mathew E McFall, Landscape Architect

For Western Water

Ms Michele Quigley QC, with Mr Peter O'Farrell of counsel, instructed by Deacons. Ms Quigley called evidence from:

- Mr John Glossop, Town Planner
- Mr Ray Phillips, agricultural scientist and management consultant, of Phillips Agribusiness
- Dr Daniel Deere, Microbiologist

For Responsible Authority

Ms Kate Morris, solicitor, of Maddocks.

REASONS

WHAT IS THIS MATTER ABOUT?

- 1 This case is about the application of the precautionary principle when considering a proposal to construct dwellings in an open potable water catchment.
- 2 Maurice and Esther Rozen applied for a permit in 2003 to develop four dwellings on the site, each on an individual allotment. Macedon Ranges Shire Council sought further particulars to support the application and the Rozens took a long time to provide the requested information. In November 2005, nearly three years after the permit application was lodged, the Council refused the permit application. All through this permit application process, Western Water was unaware of the permit application and it was not until after an application for review by the Rozens was lodged at the Tribunal that it became aware of the permit application. It subsequently objected to the proposal and supported the Council's refusal.
- 3 Central to Western Water's opposition to four dwellings was the fact that the dwelling density would exceed one dwelling per 40 hectares, which is the benchmark density within an open potable water supply catchment established by the *Interim Guideline for planning permit applications in open, potable water supply catchment areas*.
- 4 The application for review was heard by the Tribunal¹ in May 2007 (the first Tribunal) and it subsequently set aside the Council's decision and granted a permit for four dwellings².
- 5 Western Water appealed to the Supreme Court³. Justice Osborn found the Tribunal had misstated and misapplied the precautionary principle in circumstances where it was plainly relevant, because both the Guidelines and the planning scheme policy required the Tribunal to consider the question of cumulative risk created by otherwise individually appropriate septic tank systems. The case was remitted to the Tribunal for further hearing in accordance with law and this proceeding constitutes the rehearing directed by the Court.
- 6 Following the Supreme Court case in May 2009, the Government affirmed the principle of a dwelling density of 1:40 ha by adopting the *Guidelines: planning permit applications in open, potable water supply catchment areas*.
- 7 The council and Western Water maintain their opposition to four dwellings on the land. However, each concede that two dwellings would be acceptable even though this would be slightly less than the 1:40ha dwelling density.

¹ Members Cimino and Potts

² *Rozen v Macedon Ranges SC* [2007] VCAT 1814

³ *Western Water v Rozen and Anor* [2008] VSC 382

- 8 We have reached the conclusion that only one dwelling should be permitted. In doing so, we have not only looked at water quality protection and the application of the precautionary principle, but to other planning policies and objectives applicable to the land.
- 9 We have grouped our discussion of the issues in this case as follows:
- Application of the precautionary principle
 - Landscape and visual impact
 - Application of planning policy to rural/agricultural and environmental issues

APPLICATION OF PRECAUTIONARY PRINCIPLE

What is the precautionary principle?

- 10 The Intergovernmental Agreement on the Environment expresses the precautionary principle in the following terms.

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

- i. Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
 - ii. an assessment of the risk-weighted consequences of various options.
- 11 The State Environment Protection Policy (Waters of Victoria) (“SEPP Waters of Victoria”) requires application of the precautionary principle to guide decisions about the protection and management of Victoria’s surface waters in virtually identical terms as expressed in the Intergovernmental Agreement on the Environment⁴.
- 12 The State Planning Policy Framework (SPPF) of the Macedon Ranges Planning Scheme identifies the Intergovernmental Agreement on the Environment as one of a number of national agreements, strategies and policies that provide a broad framework for the development of strategies and policies at the State level to encourage sustainable land use and development. In Victoria, state environment protection policies made under the *Environment Protection Authority Act 1970*, which includes SEPP Waters of Victoria, are binding on all sectors of the Victorian community⁵.
- 13 In *Western Water v Rozen and Anor*, Justice Osborn said with respect to the terms of the precautionary principle:

⁴ Clause 6(2) SEPP Waters of Victoria

⁵ Clause 11.03–2 and Clause 15.01–2 Macedon Ranges Planning Scheme

[96] ... The application of those words must be flexible to embrace land uses of potentially novel kinds. Their meaning in any given situation is in my view a question of fact.

[97] That meaning is not to be ascertained by reference to a judicial gloss on the meaning of the words used to state the principle. The decisions of previous tribunals of fact may offer useful guidance in a particular case but they do not define the principle. The meaning is on the other hand plainly intended to be informed by scientific understanding of the risk in issue in a particular case.

- 14 Justice Osborn found that the Tribunal had taken the position that a risk of irreversible environmental damage was necessary to invoke the precautionary principle⁶. He held that in taking this position, the Tribunal misapprehended and misstated the precautionary principle. He said it was not necessary that a risk “be so severe as to impose some long term liability to future generations”. If there is a risk of serious environmental damage it need not be one of irreversible environmental damage in order for the precautionary principle to be invoked⁷. The failure of the Tribunal was in not correctly identifying or addressing the concept of risk of “serious” as distinct from irreversible damage to the environment⁸.
- 15 It is therefore clear that the precautionary principle is applicable not only in cases where there is a risk of irreversible damage to the environment, but also whenever there is a risk of serious, although not necessarily irreversible, damage to the environment.
- 16 The distinction between “serious” as distinct from “irreversible” damage to the environment is highly relevant when assessing impacts on water quality in an open potable water catchment. There is evidence that situations may arise leading to contamination of waters in open water supply catchments that can result in human harm. The contamination may be an isolated event giving rise to serious, but not irreversible environmental damage. In this respect, impact on human health or danger to human life was held to constitute environmental damage when the primary beneficial use of the waters in issue is that of potable water⁹.
- 17 This finding by Justice Osborn was a direct response to observations by Judge McLauchlin QC in *Theo v Caboolture Shire Council*¹⁰ which was relied upon by the Rozens, that “the [precautionary] principle is concerned with environmental damage, not with danger to human life.” This can be seen as an example of the ‘judicial gloss’ that Justice Osborn had referred to earlier. It was a comment made in the context of the facts of that case. It was not a comment that had application in the current set of circumstances.

⁶ *Rozen v Macedon Ranges SC* [2007] VCAT 1814 at [127] – [128]

⁷ *Western Water v Rozen and Anor* [2008] VSC 382 at [103]

⁸ *Ibid* at [112]

⁹ *Ibid* at [115]

¹⁰ [2001] QPLR 101; [2000] QPE 059

- 18 In our view, any risk to human health must be regarded as serious. We consider this is implicit in the terms of the *Safe Drinking Water Act 2003* and the *Australian Drinking Water Guidelines*. Therefore, when considering development in open potable water supply catchment areas, risk to human health is highly relevant and, because of its serious nature, must be given priority over other planning objectives. This priority is recognised in the planning policy context of the planning scheme. Water industry legislation and policy provide detailed guidance as to how to protect water resources and avoid serious risk to human health. Essentially, this is a multiple barrier approach. It is in this context that the *Guidelines: planning permit applications in open, potable water supply catchment areas* must be considered and applied – as one barrier in a multiple barrier approach to protect drinking water quality.

Planning policy context applicable to water quality

- 19 The land is located in a Rural Conservation Zone and covered by an Environment Significance Overlay Schedule 4 (Eppalock Proclaimed Catchment). A permit is required for use and development of a dwelling pursuant to the zone control and a permit is also required for buildings and works under the overlay control.
- 20 The purpose of the Rural Conservation Zone (RCZ1) includes conserving the value specified in the schedule to the zone, which in the case of RCZ1 includes:
- To ensure that land use within water supply catchments, most particularly proclaimed catchments, will not compromise water quality.
- 21 The Environment Significance Overlay (EAO4) states the environmental significance of the area in the following terms:
- Lake Eppalock is a major water storage and recreational facility located within the Campaspe River Catchment. It is a major source of water for irrigation, stock and domestic and urban water supplies for towns within the municipality.
- 22 It further states the following environmental objective to be achieved:
- To ensure the protection and maintenance of water quality and water yield within the Eppalock Water Supply Catchment Area as listed under Section 5 of the *Catchment and Land Protection Act 1994*.
- 23 Decision guidelines that must be considered under the overlay include the statement of environmental significance and the environmental objective contained in the schedule and the impact of the use and development on the water catchment.
- 24 The discretion to grant a permit under both controls must be exercised having regard to the State Planning Policy Framework (SPPF) and Local Planning Policy Framework (LPPF) of the planning scheme. Clause 18.09-2 of the SPPF states that:

Planning and responsible authorities should ensure that water quality in water supply catchments is protected from possible contamination by urban, industrial and agricultural land uses.

25 Clause 15.01 of the SPPF deals with protection of catchments, waterways and groundwater. The objective is:

To assist the protection, and where possible, restoration of catchments, waterways, water bodies, groundwater, and the marine environment.

26 Clause 15.01–2 provides that:

Planning and responsible authorities should ensure that land use activities potentially discharging contaminated runoff or wastes to waterways are sited and managed to minimise such discharges and to protect the quality of surface water and ground water resources, rivers, streams, wetlands, estuaries and marine environments.

27 The LPPF contains numerous references to the significance of water resources within the Macedon Ranges¹¹. Two extracts from the LPPF illustrate the significance of water resources and the need to protect them.

28 The local planning policy, Macedon Ranges and Surrounds, in clause 22.01 states in the policy basis:

The policy is directed primarily to the planning and management necessary for the conservation and utilisation of the policy area both as a water catchment for urban and local supply and as a location of State, metropolitan and local importance for leisure activities and nature conservation.

29 Specifically, it is policy that:

- Protection and utilisation of the resources of the policy area for water supply, tourism and recreation, and nature conservation must be the primary concern.
- Where appropriate, due account must be given to the value of the area for forestry and agriculture.
- All development in proclaimed water catchment areas and in elevated areas must be strictly limited and regulated to protect water quality, and maintain or enhance natural systems and landscape character.
- Planning for recreation and leisure must be directed predominantly towards activities, which require natural or semi-natural surroundings and must be integrated with planning for water catchment management and nature conservation so as to minimise conflicts.

30 Major influencing factors include:

¹¹ Clause 21.03 – Water Quality; Clause 21.07–3 – Sustainable Rural Land Management – Rural Living, Environmental Living and Agricultural Landscapes; Clause 22.01 – Macedon Ranges and Surrounds; Clause 22.03 – Catchment Management and Water Quality Protection; Clause 22.19 – Northern Catchments

- The unacceptable detriment to the valuable landscape, recreation, water and nature conservation resources, which would ensue if all subdivided land in the policy area were to be developed for residential purposes – and the need to develop equitable policies to avoid that result.

31 The local planning policy, Catchment Management and Water Quality Protection, in clause 22.03 identifies that the Macedon Ranges Shire contains a number of potable water supply catchments. It states:

Most of these areas are open catchments. The integrity of the water supply, both from surface watercourses and groundwater, is threatened by inappropriate land use or development. Water quality is largely determined by the quality of and management and farming practices of private landowners. The lack of reticulated sewerage and the dependence on septic tank systems for effluent disposal in many urban and rural areas of the Shire is of particular concern.

Unplanned and inappropriate patterns of development can undermine water quality in catchments which may lead to increased treatment levels and higher water tariffs. The appropriate management of the water catchments is essential for the protection of the quality and quantity of domestic, agricultural and commercial water supplies. It is also important for the maintenance of reservoirs and watercourses as recreational resources.

32 A number of these policy provisions were introduced or amended as an outcome of the council's Rural Areas Review. The Rural Areas Review resulted in Amendment C21 to the Macedon Ranges Planning Scheme¹². The panel that considered Amendment C21 said in its report¹³:

The Shire's rural areas present a range of complex and often competing issues that are not capable of easy resolution. Large areas of the Shire are in open water catchments, there are significant areas of important remnant vegetation, the Shire has a diverse and highly valued range of landscape characteristics, agriculture is a continuing and important element of the local economy and substantial areas are highly susceptible to land degradation. These issues are exacerbated by the competing interests and expectations of landowners and the continuing pressure for residential development in rural areas. If these issues are not well managed, then the important characteristics and resources that make such a significant contribution to the Shire's identity will continue to be damaged. This is not just a local issue because the Shire's water catchments, habitats and recreational features are of state significance.

In order to address these issues, the Shire needs a comprehensive and considered framework that seeks to protect and enhance the positive characteristics and features that are under threat. This means that

¹² Amendment C21 was eventually superseded by Amendment C48, which introduced many of the relevant provisions now in the Macedon Ranges Planning Scheme.

¹³ Amendment C21 to the Macedon Ranges Planning Scheme; Report of the Panel: February 2004 – Panel Findings, page 25

some of the practices of the past must stop, landowners cannot expect to have an unfettered right to subdivide and develop, and Council must be prepared to make difficult decisions in support of its planning objective.

In developing its understanding of the issues that affect the Shire's rural areas the Panel has formed a number of overarching conclusions:

- The protection of water quality should be the primary planning consideration of the Shire's water catchments; ...

33 We agree with the panel's conclusion that the protection of water quality should be the primary planning consideration in the water catchments. We consider that the wealth of planning policy and planning control objectives in the planning scheme lead to this conclusion. Whilst planning must always involve a balancing of conflicting objectives, we have no hesitation in finding that in respect of the Shire's open potable water supply catchments, net community benefit and sustainable development require protection of water quality to be the primary planning consideration. This primacy is explicitly stated in clause 22.01, which states it is policy that:

- Protection and utilisation of the resources of the policy area for water supply ... must be the primary concern.

34 It is unusual for a planning scheme to have a local planning policy that states so specifically what the primary concern for planning for an area must be. Too often there is insufficient guidance in planning schemes as to the relative weight to be placed on various, and sometimes conflicting, objectives. There can be no such doubt in the present case.

Water industry policy context

35 Water authorities, such as Western Water, are responsible for the supply and management of safe drinking water under the *Safe Drinking Water Act* 2003.

36 The *Safe Drinking Water Act* 2003 and the *Safe Drinking Water Regulations* 2005 require Western Water to develop and maintain risk management plans in protecting drinking water quality. Western Water develops its risk management plans using the *Australian Drinking Water Guidelines*, which promote the implementation of a multi barrier approach from catchment through to customer tap. This multi barrier approach includes catchment management and source water protection, detention in protected reservoirs or storages, multiple sources of supply, water treatment and disinfection, and protection and maintenance of the distribution reticulation system.

37 The *Australian Drinking Water Guidelines*¹⁴ are intended to provide a framework for good management of drinking water supplies that, if implemented, will assure safety at point of use. They are not mandatory

¹⁴ National Water Quality Management Strategy: *Australian Drinking Water Guidelines* 6 (2004); endorsed by NHMRC (National Resource Management Ministerial Council) 10-11 April 2003

standards, however, they provide a basis for determining the quality of water to be supplied to consumers in all parts of Australia. They are intended for use by the Australian community and all agencies with responsibilities associated with the supply of drinking water, including catchment and water resource managers, drinking water suppliers, water regulators and health authorities.

38 The introduction to the *Australian Drinking Water Guidelines* states that:

Safe drinking water is essential to sustain life. Therefore, every effort needs to be taken to ensure that drinking water suppliers provide consumers with water that is safe to use.

39 The *Australian Drinking Water Guidelines* set out a series of fundamental guiding principles that should always be remembered and not obscured by the ever increasing knowledge base about management of drinking water systems, monitoring and the vast array of contaminants that may be present in drinking water. These guiding principles are as follows:

1. The greatest risk to consumers of drinking water are pathogenic micro organisms. Protection of water sources and treatment are of paramount importance and must never be compromised.
2. The drinking water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the raw water supply.
3. Any sudden or extreme change in water quality, flow or environmental conditions (eg. extreme rainfall or flooding) should arouse suspicion that drinking water might become contaminated.
4. System operators must be able to respond quickly and effectively to adverse monitoring signals.
5. System operators must maintain a personal sense of responsibility and dedication to providing consumers with safe water, and should never ignore a consumer complaint about water quality.
6. Ensuring drinking water safety and quality requires the application of a considered risk management approach.

40 Maintaining robust multiple barriers as required by guiding principle 2 is an integral element of the approach adopted by Western Water in undertaking its responsibilities under the *Safe Drinking Water Act* 2003. Traditional preventative measures are incorporated as or within a number of barriers and include:

- catchment management and source water protection
- detention in protected reservoirs or storages
- extraction management
- coagulation, flocculation, sedimentation and filtration

- disinfection
- protection and maintenance of the distribution system¹⁵

41 With respect to guiding principle 2 and the importance of robust multiple barriers, the *Australian Drinking Water Guidelines* state:

The multiple barrier approach is universally recognised as the foundation for ensuring safe drinking water. No single barrier is effective against all conceivable sources of contamination, is effective 100 per cent of the time or constantly functions at maximum efficiency. Robust barriers are those that can handle a relatively wide range of challenges with close to maximum performance and without suffering major failure.

Although it is important to maintain effective operation of all barriers, the advantage of multiple barriers is that short-term reductions in performance of one barrier may be compensated for by performance of other barriers. Prevention of contamination provides greater surety than removal of contaminants by treatment, so the most effective barrier is protection of source waters to the maximum degree practical. Knowing how many barriers are required to address the level of potential contamination in individual systems is important. This requires a thorough understanding of the nature of the challenges and the vulnerabilities of the barriers in place. In terms of reliability, there is no substitute for understanding a water supply system from catchment to consumer, how it works and its vulnerabilities to failure.

Finally, a robust system must include mechanisms or failsafes to accommodate inevitable human errors without allowing major failures to occur.¹⁶ [*Tribunal emphasis*]

42 With respect to catchment management and source water protection, the *Australian Drinking Water Guidelines* state:

Catchment management and source water protection provide the first barrier for the protection of water quality. Where catchment management is beyond the jurisdiction of drinking water suppliers, the planning and implementation of preventive measures will require a coordinated approach with relevant agencies such as planning authorities, catchment boards, environmental and water resources regulators, road authorities and emergency services.

Effective catchment management and source water protection include the following elements:

- developing and implementing a catchment management plan, which includes preventive measures to protect surface water and groundwater

¹⁵ *Australian Drinking Water Guidelines* (2004), section 3.3.1

¹⁶ *Australian Drinking Water Guidelines* (2004) section 1.1

- ensuring that planning regulations include the protection of water resources from potentially polluting activities and are enforced
- promoting awareness in the community of the impact of human activity on water quality.

Whether water is drawn from surface catchments or underground sources, it is important that the characteristics of the local catchment or aquifer are understood, and the scenarios that could lead to water pollution are identified and managed. The extent to which catchment pollution can be controlled is often limited in practical terms by competition for water and pressure for increased development in the catchment.

Effective catchment management has additional benefits. By decreasing contamination of source water, the amount of treatment and quantity of chemicals needed is reduced. This may lead to health benefits through reducing the production of treatment by products, and economic benefits through minimising operational costs.

In surface water catchments, preventive measures can include:

- selection of an appropriate source water (where alternatives exist)
- exclusion or limitations of uses (e.g. restrictions on human access and agriculture)
- protection of waterways (e.g. fencing out livestock, management of riparian zones)
- use of planning and environmental regulations to regulate potential water polluting developments (e.g. urban, agricultural, industrial, mining and forestry)
- use of industry codes of practice and best practice management
- regulation of community and on site wastewater treatment and disposal systems
- stormwater interception.¹⁷

43 The National Water Quality Management Strategy, which auspices the *Australian Drinking Water Guidelines*, is one of the national agreements referred to in clause 11.03-2 of the SPPF, together with the Intergovernmental Agreement on the Environment. Thus the *Australian Drinking Water Guidelines* are directly relevant to a consideration of this application. Further, we consider that they would fall within the ambit of section 60(1A)(g) of the Act as a matter that, in the circumstances, the responsible authority (and hence the Tribunal) should consider.

¹⁷ *Australian Drinking Water Guidelines* (2004) section 3.1

Guidelines: planning permit applications in open, potable water supply catchment areas

- 44 A critical issue in this case is application of the guideline of one dwelling per 40 hectares contained in the *Guidelines: planning permit applications in open, potable water supply catchment areas* (May 2009).
- 45 At the time of the first Tribunal decision and the Supreme Court appeal, the relevant guidelines were the *Interim guideline for planning permit applications in open, potable water supply catchment areas* (August 2000) (“the Interim Guidelines”). The Interim Guidelines also provided that where a planning permit was required to use land for a dwelling, the density of dwellings should be no greater than one dwelling per 40 hectares (1:40 ha). In the present case, if one dwelling is permitted on each allotment, the dwelling density would be substantially less than this guideline (in the order of 1:18 ha).
- 46 In the earlier Tribunal decision, the Tribunal was critical of the 1:40 hectare density guideline, describing it as a “blunt instrument”¹⁸ and stating that the failure to explain how 1:40 hectare density should be determined was “a flaw in these guidelines”¹⁹. The Tribunal took the view that:

[111] The land capability assessments demonstrate a capacity to meet the Code of Practice requirements. When considered in conjunction with the articulation of local policy relevant to water quality derived from catchment wide strategies, it follows that the conditional requirements set out in the Interim Guidelines to allow for an increase in dwelling density above the 1:40ha guideline have, in our opinion, been satisfactorily addressed. We therefore dismiss the conservative application of the 1:40ha density by WW [Western Water] and are satisfied that the land is capable, under appropriate management, to contain domestic wastewater such that the risk presented to human health and the environment is not so high as to warrant refusal of the proposal.

[112] Importantly it is also our view that while guideline 1 of the Interim Guidelines has been satisfied, the land capability assessments demonstrate the ability to contain wastewater within the subject land in a practical and workable manner. When having regard to local and state policy, it is our view that this carries the greater weight over a steadfast adherence to the 1:40ha dwelling density.

- 47 As outlined earlier, the Supreme Court took the view that: “Such an approach does not adequately address the cumulative risk factor recognised both by the Guidelines and the terms of the planning scheme policies either at all, or within the context of the precautionary principle.”²⁰ Simply

¹⁸ [2007] VCAT 1814 at [103]

¹⁹ Ibid at footnote No 42

²⁰ [2008] VSC 382 at [105]

accepting the provision of a satisfactory land capability assessment, coupled with the design of a septic system in accordance with the Septic Tank Code of Practice as achieving a satisfactory result, as the Tribunal had done, “does not recognise that both the Guidelines and the planning scheme provisions make clear that the cumulative risk of adverse impact to water quality resulting from successive residential developments, is a discretely relevant consideration when permits are sought for increased densities of septic tank facilities within a potable water supply catchment.”²¹

48 Following the Supreme Court decision in *Western Water v Rozen and Anor*, the Minister for Planning adopted in May 2009 the *Guidelines: planning permit applications in open, potable water supply catchment areas* (“the current Guidelines”).

49 The current Guidelines have been adopted by the Minister for Planning for the purposes of section 60(1A)(g) of the *Planning and Environment Act* 1987. The current Guidelines apply to all open, potable water supply catchments declared to be special water supply catchment areas under Division 2 of Part 4 of the *Catchment and Land Protection Act* 1994. They apply to the subject land and we find that the circumstances here require the current Guidelines to be considered.

50 The current Guidelines restate and reinforce the dwelling density of 1:40 ha in open, potable water supply catchment areas. They make it clear that compliance with the Septic Tank Code of Practice is not of itself sufficient, a point that was made by Justice Osborn.²² They refer to the provisions of the SPPF relating to the importance of water quality in water catchments²³ and section 53M of the *Environment Protection Authority* 1970, which provides that a municipal council must refuse a septic tank permit if a proposed onsite waste water/septic tank system is contrary to any state environment protection policy or waste management policy. SEPP Waters of Victoria requires the application of the precautionary principle to guide decisions about the protection and management of Victoria’s surface waters when considering a permit for a septic tank system. The current Guidelines state:

The proper application of the precautionary principle requires consideration of the cumulative risk of the adverse impact of onsite waste water/septic tank systems on water quality in open, potable water supply catchments resulting from increased dwelling density.
[*Tribunal emphasis*]

51 In the current Guidelines, Guideline 1 regarding density of dwellings is different to the wording of the equivalent guideline in the Interim Guidelines. It now includes explicit reference to the cumulative impact of onsite waste water/septic tank systems and provides as follows:

²¹ Ibid at [107]

²² [2008] VSC 302 at [50]

²³ Clause 15.01-2 and clause 18.09-2

Guideline 1: Density of dwellings

Where a planning permit is required to use land for a dwelling or to subdivide land:

- the density of dwellings should be no greater than one dwelling per 40 hectares (1:40 ha); and
- each lot created in the subdivision should be at least 40 hectares in area.

This does not apply if a catchment management plan, water catchment policy or similar project addressing land use planning issues and the cumulative impact of onsite waste water/septic tank systems has been prepared for the catchment, and the objectives, strategies and requirements of the plan or project have been included in the planning scheme. [*Tribunal emphasis*]

- 52 There were exemptions to Guideline 1 in the Interim Guidelines as well, but they were not the same. The earlier Tribunal decision did not specifically address the exemptions. Justice Osborn did address them, but found that it was open to the Tribunal to treat both the criteria stated in Guideline 1 by way of exception to the 1:40 ha benchmark, as being met.²⁴ At the hearing before us, the council and Western Water suggested that although His Honour made findings on certain policies in the planning scheme, he did so without the knowledge that the first limb of the Interim Guidelines had not been met because the point had not been raised in the initial VCAT hearing and therefore it was not able to be raised before the Court.
- 53 Counsel for the Rozens placed great weight on Justice Osborn's findings about policy provisions in the planning scheme and whether or not they "covered the field" contemplated by the exceptions in the Interim Guidelines and consequently the current Guidelines. He submitted that the dwelling density in Guideline 1 did not apply because the situation fell within the exception.
- 54 We do not intend to undertake an exhaustive analysis of what Justice Osborn said on this point because he was considering the Interim Guidelines, which have now changed. We consider that the changes made to the exemptions to Guideline 1, in particular now requiring a catchment management plan, water catchment policy or similar project to address the cumulative impact of onsite waste water/septic tank systems as well as addressing land use planning issues, was deliberately intended to exclude the range of old (and sometimes unavailable) reference documents noted at the end of various clauses of the planning scheme from being considered as fulfilling the requirements of the exemption. We consider this intention is evident from a comparison of the exemption to Guideline 1 in the Interim Guidelines and the exemption in the current Guidelines. The words underlined are additions to the current Guidelines: the strike through words are deletions from the Interim Guidelines.

²⁴ [2008] VSC 302 at [82]

Guideline 1: Density of dwellings

Where a planning permit is required to use land for a dwelling or to subdivide land:

- The density of dwellings should be no greater than one dwelling per 40 hectares (1:40 ha); and
- Each lot created in the subdivision should be at least 40 hectares in area.

This does not apply if a catchment management plan, water catchment policy or similar project addressing land use planning issues **and the cumulative impact of onsite waste water/septic tank systems** has been prepared for the catchment, and the objectives, strategies and requirements of the plan or project have been included in the planning scheme.

~~This does not apply if:~~

- ~~• A catchment management plan or similar project addressing land use planning issues has been prepared for the catchment, and the objectives, strategies and requirements of the plan or project have been included in the planning scheme; and~~
- ~~• A land capability assessment for the on-site management of domestic wastewater has been completed which shows that a greater or lesser minimum subdivision area and density of development is appropriate.~~

~~The land capability assessment should be undertaken in accordance with the requirements of Appendix A to the Code of Practice – Septic Tanks, On-site Domestic Wastewater Management, EPA, March 1996 to the satisfaction of the Responsible Authority.~~

~~The EPA is preparing an information bulletin which will set out in greater details, the procedure and criteria for preparing a land capability assessment and will supplement Appendix A.~~

- 55 We do not consider that any of the local planning policies in the planning scheme or the reference documents they refer to can be considered to be “a catchment management plan, water catchment policy or similar project *addressing land use planning issues and **the cumulative impact of onsite waste water/septic tank systems***, which has been prepared for the catchment, and where the objectives, strategies and requirements of the plan or project have been included in the planning scheme”, as contemplated by the exemption to Guideline 1. None of the policies or reference documents fulfil both criteria, in particular the cumulative impact criterion.
- 56 We were given a copy of a draft report prepared for Western Water, Coliban Water, Southern Rural Water and Goulburn Murray Water dated May 2007 and prepared by Ecos Environmental Consulting and titled *Macedon Ranges Shire Water Quality Risk Assessment*. The risk assessment is part of a broader project to develop a Catchment Water Quality Protection Policy for the Macedon Ranges Shire. The policy is

intended to guide each of the four water authorities when assessing applications for planning permits referred pursuant to section 55 of the *Planning and Environment Act 1987* and will enable each authority to adopt a consistent approach to the management of new land use and development in special water supply catchment areas. (These are the areas where the current Guidelines apply.) We consider that when complete, such a policy may represent the type of water catchment policy that the exemption to Guideline 1 refers. However, the policy has not been finalised and the Macedon Ranges Shire Water Quality Risk Assessment remains in draft form only.²⁵

- 57 In these circumstances, we find that Guideline 1 of the current Guidelines has not been displaced. Accordingly, we find that Guideline 1 applies to this permit application and, as such, the density of dwellings should be no greater than one dwelling per 40 hectares.
- 58 In addition to the density of dwellings guideline, other guidelines in the current Guidelines apply to effluent disposal and septic tank system maintenance (Guideline 2); vegetated corridors and buffer zones along waterways (Guideline 3); buildings and works (Guideline 4); and agricultural activities (Guideline 5). We will deal with these guidelines, where relevant, later.
- 59 We note that the guidelines are cumulative. Therefore, just because the effluent disposal system for the four dwellings meets the requirements of Guideline 2, does not mean that the dwelling density of Guideline 1 does not apply.

The evidence

- 60 The current Guidelines emphasise the application of the precautionary principle to guide decisions about the protection and management of water resources. It emphasises the finding made by Justice Osborn in *Western Water v Rozen and Anor* that the proper application of the precautionary principle requires consideration of the cumulative risk created by otherwise individually appropriate waste water/septic tank systems.
- 61 Dr Nick O'Connor of Ecos Environmental Consulting gave evidence on behalf of Western Water at the first Tribunal hearing²⁶. In the hearing before us, evidence was given on behalf of Western Water by Dr Daniel Deere in a report entitled *Risks to Drinking Water Quality from Development in Drinking Water Catchments (21 July 2009)*. Dr Deere is an expert in water quality management and public health microbiology.
- 62 His evidence related to the risks to water quality of development in open, potable water catchments, particularly the aspect of housing density and the risk to water quality, and application of the precautionary principle in managing catchment risk.

²⁵ We were told that work on it was suspended pending the Supreme Court decision.

²⁶ Much of Dr van der Graaff's evidence continued to refer to Dr O'Connor's evidence.

- 63 It was Dr Deere's expert view that the application for a planning permit for four dwellings cannot be supported as development and use of dwellings in an open, potable water supply catchment at a density less than 1:40 ha cannot be supported. He gave evidence that pathogens can result in human harm. Pathogens can contaminate waters in open water supply catchments and can present most risk when those pathogen sources are from human origins, including from waste water treatment plants. He emphasised that risks arose not so much from a properly functioning, well maintained waste water treatment plant, but from the failure of onsite waste water management systems. Exacerbating issues for the ongoing effective operation of onsite water management systems include institutional limitations, temporal limitations (as new systems becomes old) and human limitations (human error and/or deliberate changes to the operation of the onsite waste water system).
- 64 Dr Deere supported the 1:40 ha dwelling density limitation in both the Interim Guidelines and the current Guidelines because:
- It provides an adequate benchmark for protection of the water supply from human pathogens. It is not a precise rule, but rather a good rule of thumb that provides a buffer for things to go wrong.
 - The density limitation of 1:40 ha provides for safe irrigation practices from onsite waste water management systems ensuring protection of the environment from salts, nutrients and hydraulic flows, as well as the protection of human health relating to the reduction and lack of movement for pathogens into water sources.
 - Onsite waste water treatment systems present a higher risk to water quality, and higher densities of dwellings with such systems provide a higher water quality risk. He referenced a number of studies reporting poor compliance for onsite systems and a failure to meet performance criteria for aerated waste water treatment systems, which is the type of system proposed in this case.
 - The dwelling density across the catchment already exceeds the limitation of 1:40 ha.
- 65 Dr Deere made the point that water quality in the Campaspe Reservoir is already compromised. In his view, the catchment is at a point where it is uncomfortably close to the limits in terms of current treatment systems. It is not yet at a point where Western Water needs to abandon its attempts to manage the catchment to maintain water quality and opt instead for the installation of much higher cost treatment systems. However, he emphasised that the margin of safety that the one dwelling per 40 hectare density limitations sought to achieve was not so great as to justify the risk of going below the 1:40 ha dwelling density if you have a choice.
- 66 He referenced various studies to demonstrate that engineering and management systems fail and this cannot be avoided. Often failure is due

to human misunderstanding, lack of maintenance and human intervention resulting in non-conformance with installation and operation instructions. While onsite sewerage management systems are capable of producing good water quality outcomes at first installation, much of the focus is on the performance capability at installation. New systems eventually become old and therefore cumulative increases in onsite sewerage management systems could eventually lead not only to increased risk of failure but also to an increased number of systems failing in any one catchment. It is well established that at an institutional level, there is a very poor track record in ensuring that systems are installed, used and maintained appropriately, and for identifying failing systems.

- 67 Dr Robert van de Graaff gave evidence on behalf of the Rozens at both Tribunal hearings. The nub of his evidence in each case was that the proposed four new septic tank systems can have no discernable impact on water quality of the Campaspe River downstream of the proposed development. In his view, Western Water is unnecessarily concerned about the risk to water quality at Woodend. He believes that the exclusive focus on the possibility that a few (four) new septic tank systems on large lots averaging 18 hectare could cause contamination and therefore should not be permitted is entirely misplaced. He considers there is hardly any evidence that municipal water supplies have been impacted upon by septic tanks. Where they have, it was caused by special circumstances or extraordinary rainfall events mobilising contaminants in major runoff from agricultural land, as well as from the leaking municipal sewers, which then arrived at the intake of the water purification plants. In view of the various land uses already going on, especially agriculture, the risk of contamination of the river water is orders of magnitude higher than can be attributed to a small number of new septic tanks.
- 68 In his evidence, Dr van de Graaff brings a particular scientific approach to his analysis. He was dismissive of the policy approach embodied in the current Guidelines, which tends to take into account human failings and system failures. He also questioned whether isolated incidences of gastroenteritis in humans could always be considered “serious”.
- 69 Mr Paul Williams also gave evidence on behalf of the Rozens about the aerated waste water treatment system proposed for each of the four dwellings and provided a land capability assessment for each lot. The waste water treatment system is a sophisticated, secondary treatment fully automated system that incorporates a multiple barrier approach to guard against conceivable sources of contamination as recommended by the *Australian Drinking Water Guidelines*.
- 70 Mr Williams’ overall conclusions were as follows:
- While impacts from contaminated drinking water can be severe, the risk of this occurring from the proposed development is extremely low. The LCAs recommend a conservative, scientifically based, well founded waste disposal system with inherent multiple barriers of

safety. Land remediation and the removal of stock in the development will improve the quality of returns from the subject land.

Cumulative risk from the development is also extremely low and can be further lowered by adopting additional measures if required. The risk of serious or irreversible damage is extremely low.

Issue of cumulative risk

- 71 No issue was taken by any party with Mr Williams' evidence that if the waste water treatment system was installed, operated and maintained as recommended by Mr Williams, it would function satisfactorily, meet statutory requirements and would not result in a risk of contamination to surface or ground waters.
- 72 However, we consider the real issues are the risks associated with waste water treatment systems that do not function as designed (for various reasons) and the increased presence of people generally within the catchment.
- 73 Ideally, potable water supply catchments would all be closed. The quality of Melbourne's drinking water is a product of its closed catchments. But it is not an ideal world and there are many open potable water supply catchments that must be managed.
- 74 The draft Macedon Ranges Shire Water Quality Risk Assessment identifies a range of potential hazards which would affect water quality, including:
- Road/creek crossings on sealed and unsealed roads
 - Houses
 - Farm buildings
 - High risk land uses, such as: intensive animal production, irrigated horticulture, cropping and cereals, and grazing modified pastures.
 - Steep slopes
 - High density housing
 - Inadequate riparian buffers
 - Change in agricultural practices
- 75 Implicit in this list of hazards is people. For example, higher density housing associated with rural lifestyle use involves not just additional septic tank/waste water treatment systems, but more horses and domestic pets, more use of chemicals, pesticides and sprays, and more direct water contact by people and animals. Perhaps if the risks posed by the presence of people within catchments were articulated more explicitly, as detailed by Dr Deere in his evidence, there might be a better understanding of the notion of cumulative risk rather than the current focus just on the risks presented by each individual septic tank/waste water treatment system.

- 76 There is a fundamental conflict between the evidence of Dr Deere and Dr van der Graaff regarding this issue of cumulative risk. At its simplest, the conflict can be characterised as faith in science versus a recognition of human fallibility and Murphy's law (i.e. if anything can go wrong, it will).
- 77 This inherent conflict between evidence given by Dr van der Graaff and by the likes of Dr Deere or Dr O'Connor has been previously commented upon by the Tribunal in *Hobbs v Macedon Ranges SC*²⁷ where the Tribunal upheld the council's refusal to issue a permit for subdivision of a rural property in an open, potable water catchment area. Application of the Interim Guidelines was in question and the Tribunal said:

[22] In the Australian context water generally and palatable water more particularly is a very valuable resource. One of planning's most important roles is to protect resources so that they can be most effectively utilised for the benefit of the community at large.

[23] The unresolvable debate between Dr O'Connor and Dr Van der Graaff demonstrates how difficult it is to establish with any sort of certainty the likely impact of the future use of this land arising from the proposed subdivision will have on the quality of water in the Merrimu catchment. Dr Van der Graaff submits that the lots are sufficiently large, the soil types sufficiently appropriate, and the lots are sufficiently distant from water courses, for the Tribunal to be satisfied that there is a negligible risk of contamination. Moreover, the civil engineers propose a system of catchment drains and ponds to intercept and filter all surface runoff whether or not it is contaminated in some way or other. On the other hand the approach adopted by the Minister's interim policy, is much more conservative, While it accepts that land within open potable water catchments will be used, and have reasonable expectation to be used for purposes consistent with the zone, the policy nevertheless focuses on limiting the extent to which land within such catchments are used for residential purposes.

[24] It is our view that having regard to the importance of the resource, the conservative approach of the interim guidelines is the most appropriate approach. It is not really a matter of being sure that in some way the proposed septic tank system is functioning adequately, in a more general sense the subdivision will result in a significant increase in human activity within the catchment area and this must lead to an increase in risk. The proposed increase in activity is not really associated with the continued rural use of the land in accordance with the purposes of the zone and therefore it seems difficult to justify the additional risk involved, however slight it may be. ...

²⁷ [2000] VCAT 1119

- 78 Dr van der Graaff is a scientist whose area of expertise is in soil science. He admits in his evidence statement that he is not a microbiologist but “through my background in agricultural science, that incorporates various life sciences such as soil microbiology, botany, and plant physiology I have some useful understanding of the issues at hand.”
- 79 By contrast, Dr Deere is a scientist whose areas of expertise are water microbiology and biotechnology and who has extensive experience in water quality management and public health micro biology.²⁸
- 80 We have highlighted the difference in expert qualifications because it is necessary for us to indicate whose evidence we prefer. In this particular case, we prefer the evidence of Dr Deere to that of Dr van der Graaff in terms of assessing the issue of cumulative risk and whether the dwelling density of 1:40 ha identified in the current Guidelines should be applied.
- 81 We have great respect for Dr van der Graaff as a soil scientist and we do not doubt that in an ideal operating environment water flows through soils are as slow as he describes and consequently the risk of contamination to the Campaspe River from effluent is so small as to be negligible, as Dr van der Graaff says. Nor do we doubt that septic tank/waste water treatment systems when properly installed, operated and maintained effectively remove pollutants and pathogens from effluent. This is what septic tanks are designed to do and the Septic Tank Code of Practice has been developed to provide acceptable standards and criteria for the management of onsite domestic waste water disposal. The minimum setback distances described in the Code of Practice are a backup measure in case the system fails. There is no doubt that septic tanks can, and for the most part, do operate effectively to treat and dispose of sewerage and waste water on site.
- 82 However, Dr van der Graaff has far more faith in the operational characteristics and effectiveness of multiple barriers as a means of preventing contamination of water supplies than Dr Deere. In his evidence, Dr van der Graaff was dismissive of a formula or policy approach such as represented by the current Guidelines. He takes the view that:

Measures taken or proposed for catchment protection by the catchment manager, or advocated by Western Water, need to be based on a realistic, and as much as possible a quantifiable basis. I am not aware of any pathogen modelling, nutrient modelling or general contamination of streams modelling that result in a critical minimal acceptable land holding of 40 ha, regardless, apparently, of the type of land use. Therefore, it may be that 40 ha is as much a “formula” as

²⁸ Dr Deere is a Founding Partner of professional services business specialising in water quality risk assessment and management planning across the urban and rural water cycles. One key area of work is quantitative microbial and chemical health risk assessment of waterborne disease using probabilistic modelling to predict risks in terms of endemic disease burdens and outbreaks. Another key area of work is water quality management planning including training, facilitation and auditing, to meet the requirements of the Australian Drinking Water Guidelines, Australian Guidelines for Water Recycling, WHO Guidelines for Drinking Water Quality, Victorian Safe Drinking Water Regulations Risk Management Plans (2005), WHO/FAO Codex HACCP, AS-ISO 22000:2005 and WSAA Aquality.

mandatory setbacks of 100m to a stream used for producing potable water, and loading rates based on AS1547:2000 or Environment Protection Authority Guidelines.

Far more effective protection, in my mind, would be created by case by case designs using vegetation barriers, stormwater holding basins, management of pollutants at source, by regulating land use close to stream banks.

- 83 Dr van der Graaff is sceptical about the various studies that are referred to in Dr O'Connor's report to the earlier Tribunal hearing and Dr Deere's report. In his view, most of the serious incidents of contamination can be attributed to factors other than the normal operation of septic tank systems. He judges the risk posed by the proposed development of four new homes and septic tank systems in terms of how they individually may affect water quality in the catchment and concludes that even if they did fail, they would not make a discernable difference.
- 84 In our view, this approach fails to assess the effect of four new dwellings and waste water/septic tank systems in a cumulative sense or to take account of human or system failings, or the other risks associated with human presence in the catchment, as identified by Dr Deere. An assessment of the risks posed by each system individually, rather than the cumulative risk of multiple systems in close proximity to the water supply system, was the approach adopted by the earlier Tribunal, which the Supreme Court rejected as not being the correct approach²⁹.
- 85 In his evidence, Dr Deere highlighted that it is when waste water/septic tank systems are not functioning optimally and other things occur, such as extreme rainfall events, that problems can arise. He emphasised that the state of knowledge concerning catchment management, the management of drinking water systems and the vast array of contaminants that may present in drinking water has advanced dramatically in recent years. This reflects the view expressed in the *Australian Drinking Water Guidelines*. Dr Deere instances knowledge about human viruses as one significant area where the state of knowledge has advanced. He says that human viruses are a problem and that septic tanks do not deal with them or neutralise them in the same way that they can deal with and neutralise ecoli and other pathogens. Viruses may contaminate water supplies both from disposal of effluent from septic tank waste water treatment systems and from direct contact with surface waters (eg swimming or boating). Whilst Dr van der Graaff had not taken them into account, Dr Deere emphasised that Western Water needed to do so.
- 86 Invariably, says Dr Deere, contamination is a result of human error, human failing, ageing systems, lack of maintenance and monitoring, and the failure by people to appreciate the implications of how their system works in order to appreciate the possible consequences of poor operation and maintenance.

²⁹ See [2008] VSC 382 [105] – [109]

All these factors increase the risk of contamination. For this reason, a limitation on the density of dwellings to protect water quality was one appropriate measure to limit the risk from treated effluent affecting environmental and human health. Limiting dwelling density is just one element in the multi barrier approach to ensuring safe drinking water that is incorporated in the *Australian Drinking Water Guidelines*.

- 87 As we have said, we accept the evidence of Dr Deere. We consider that every time an additional dwelling is permitted in the catchment, an additional, albeit unquantifiable, risk, is created of potential contamination to the quality of water. Individually, the risk from each dwelling may be minimal but the cumulative effect of these incremental risks, coupled with all the other risks which exist, mean that dwelling density in open potable water supply catchments must be curtailed.
- 88 We accept that the special needs of open potable water supply catchments justify a limitation on dwelling density that operates over and above any zone provisions. In the absence of a specific water catchment overlay, the Government has clearly expressed a strong policy position to limit dwelling density to one per 40 hectares by adopting the *Guidelines: planning permits in open, potable water supply catchment areas (May 2009)*.
- 89 We consider that planning permit applications in open potable water supply catchments should be determined by reference to the policy in the current Guidelines; that each of the individual guidelines should be applied cumulatively; and that the current Guidelines should take priority over competing policy objectives or decision guidelines in the planning scheme in the event of a conflict. We endorse guiding principle 1 of the *Australian Drinking Water Guidelines* that protection of water sources is of paramount importance and must never be compromised.
- 90 We therefore conclude that an application of the current Guidelines, in particular the density of dwellings guideline of one dwelling per 40 hectares, must lead to a conclusion that the current permit application for four dwellings cannot be supported.
- 91 The 1:40 ha density is a precautionary measure. The figure of 40 hectares has not been selected on a scientific basis but as a rule of thumb. We accept that experience indicates that water from catchments with dwelling densities at around this level require a certain level of treatment and higher densities require much higher levels of treatment, which are more expensive.
- 92 We accept the advice of Western Water that the Campaspe River catchment is at a point which is uncomfortably close to the limits in terms of current treatment systems. This makes managing the catchment to minimise the cumulative impact of further risks very important. We consider that a proper application of the precautionary principle in the present case would justify requiring a dwelling density of 1:40 ha as advocated by Western Water and in line with the current Guidelines.

93 Given the primacy of water quality considerations in the planning scheme, we also consider that four dwellings cannot be supported having regard to the zone and overlay provisions applying to the land.

94 The question now is whether any lesser number of dwellings should be permitted.

Measuring the dwelling density

95 We acknowledge that the failure to provide any guidance about how to measure dwelling density under the current Guidelines is a shortcoming, although not necessarily the flaw identified by the previous Tribunal³⁰.

96 There are different approaches to calculating the density depending on whether the site alone is considered, an area within a given radius of the site, or the catchment as a whole. We consider that more guidance should be given in the Guidelines to this issue. Nevertheless, the absence of such guidance does not detract from the weight to be placed on the current Guidelines. It simply means that there is some flexibility to apply the Guidelines in a pragmatic way.

97 By any criteria, the density of 1:40 ha is exceeded by the current permit application for four dwellings. Mr Glossop estimated the density to be 1:18 ha. On the other hand, to allow only one dwelling on the total site area of 72.35 hectares would mean that the density was well exceeded.

98 At the hearing, both the council and Western Water conceded that in terms of applying the current Guidelines, two dwellings would be acceptable, which on a site specific basis would result in a density of approximately 1:36 ha. The Rozens said that if the Tribunal would not support their application for four dwellings, it should grant a permit for two dwellings rather than one only or rejecting the application completely.

99 If we accept that two dwellings could possibly be acceptable from a water quality perspective under the flexibility offered by the current Guidelines, whether a permit be granted for one dwelling or two then needs to be determined by reference to the other provisions of the planning scheme. Under the Rural Conservation Zone, a permit is required for use and development of a dwelling. There is no minimum lot size. A permit for development is also required under the ES04. In deciding whether to grant a permit, there are a range of decision guidelines and policies to consider, apart from those relating to water quality. In our view, the most relevant of these factors are:

- landscape and visual impact; and
- rural/agriculture and environmental issues.

100 We now turn to the issue of whether to grant a permit for one dwelling or two³¹.

³⁰ *Rozen v Macedon Ranges SC* [2007] VCAT 1814 at footnote [42]

LANDSCAPE AND VISUAL IMPACT

- 101 The land is cleared grazing land falling gently towards the Campaspe river. A ridge line running through Lot C enjoys an eastward panoramic view towards Mt Macedon. There are some isolated mature remnant trees along the river and a cove of mature remnant eucalypts on the ridge on lot C.
- 102 According to a report prepared by Ms Carol Frank Mas, for the first Tribunal hearing, generally that the remnant trees are in a stressed state after years of those for grazing, soil compaction, weed invasion and low rainfall. There are dead and dying trees along the river, and there is no evidence of saplings or seedlings by way of regeneration.
- 103 Visually, the land is mostly screened from Ashborne Road and Chambers Road by existing road side vegetation, but there are open views towards the site from surrounding properties across the river and from Falloons Road.
- 104 Landscaping plans prepared by Ms Frank-Mas on behalf of the Rozens provide:
- For retention of existing remnant native vegetation;
 - Revegetation, particularly along the Campaspe River;
 - Further revegetation around the existing outcrops of remnant vegetation in selected positions on Lots B and C;
 - A weed eradication program;
 - The provision of fencing around clumps of remnant trees.
- 105 New vehicular access is intended to service each lot although it is not anticipated there will be any removal of roadside vegetation.
- 106 The site is about 7km southwest of the Woodend township, which has a population in the order of 4000 persons, although it is expected to grow to about 5200 by 2030.
- 107 Land generally to the east of the site towards Woodend and on the other side of the Campaspe River is occupied by smaller land holdings. Land to the north and west of the site is predominantly farming land, although there are elements of recent subdivision and dwelling approvals particularly to the immediate north of Lots A and B. The exception is land to the west, around the Ashbourne hamlet, which contains a mix of older and more recent housing on smaller lots, but no shops or community facilities. Effectively, they constitute a rural-living style land usage.
- 108 From a visual perspective, we consider that two dwellings could be accommodated without detracting unduly from the landscape character – one on combined lots A and B and one on combined lots C and D. We consider that two dwellings would represent a transition from the smaller land holdings and higher densities of dwellings to the east and the more

³¹ We do not consider there is any legitimate reason why a permit for one dwelling at least should not be granted.

sparsely settled land to the north and west. We consider that if the landscaping plans are implemented, the proposal will visually improve the landscaping quality of the site.

109 One of the purposes of the Rural Conservation Zone (repeated in Schedule 1) is:

To conserve and enhance the cultural significance and character of open rural and scenic non urban landscapes.

110 We have concluded that permitting two dwellings on this land would not be contrary to this purpose.

APPLICATION OF PLANNING POLICY TO RURAL/AGRICULTURAL AND ENVIRONMENTAL ISSUES

Rural Conservation Zone

111 In addition to the more generic purposes of implementing the SPPF and LPPF, the purposes of the Rural Conservation Zone of particular relevance to this case are:

To conserve the values specified in the schedule to this zone.

To encourage development and use of the land which is consistent with sustainable land management and land capability practices, and which takes into account the conservation values and environmental sensitivity of the locality.

To provide for agricultural use consistent with the conservation of environmental and landscape values of the area.

112 Relevant conservation values specified in schedule 1 to the Rural Conservation Zone (apart from the ones previously discussed about protecting water quality and landscape values) include:

To achieve sustainable agricultural practice.

113 There are a range of decision guidelines that must be considered in the Rural Conservation Zone, some of which are:

General issues

- How the use or development conserves the values identified for the land in the schedule.
- Whether use or development protects and enhances the environmental, agricultural and landscaping qualities of the site and its surrounds.

Rural issues

- The environmental capacity of the site to sustain the rural enterprise.
- The need to prepare an integrated management plan.

Environmental issues

- The protection and enhancement of the natural environment of the area, including the retention of vegetation and faunal habitats and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge areas.
- How the use and development relates to sustainable land management and the need to prepare an integrated land management plan which addresses the protection and enhancement of native vegetation and waterways, stabilisation of soil and pest plant and animal control.

Local planning policy

114 We have already identified that the primary local policy applicable to this area is protection and utilisation of the resources of the policy area for water supply³². However, there are a range of other local policy provisions in planning scheme that apply to this land. They include:

- **Clause 21.07-3 Sustainable Rural Land Management – Rural Living, Environmental Living and Agricultural Landscapes.**

The subject site is located within an area where the future direction for rural land is identified as “Environmental Living” on the Rural Land Use Strategy Plan in the council’s municipal strategic statement at clause 21.07-3. This is a somewhat confusing section of the planning scheme. The Environmental Living Area applies to a large area of the Shire and accordingly is very broad brush in its approach. Essentially, the objective is to protect significant environmental assets and to achieve an improvement in the condition of the environment. We agree with the council’s interpretation of this provision that there should be no expectation that all land in the Environmental Living area can be developed for rural living. Whether the development of land for a dwelling is acceptable will depend upon whether it results in a net environmental benefit. If development is allowed, it must achieve positive environmental outcomes.

- **Clause 22.17 Living Forests policy**

The subject land is also included in the Living Forests Area under clause 22.17. The objective of this policy is to protect the existing forest mosaic, and to protect the character and landscapes of the area. A permit will only be granted for a dwelling in this area where it can be conclusively demonstrated that this land use and development will not compromise existing native vegetation. However, given the absence of native vegetation on the land this policy has little, if any, relevance.

³² Clause 22.01

- **Clause 22.19 Northern Catchments policy**

The objectives of this policy include to protect water quality in the northern catchments and to provide for sustainable, productive agriculture. The policy applies to all areas included in the ESO4³³. The policy basis recognises that the reservoirs in the northern catchments area provide potable water supply for many townships in the region. It also recognises that this land provides agricultural output, which is important for the shire's economy. Agricultural output is threatened by fragmentation of land and the introduction of residential uses not related to agriculture. It is important that land use within the northern catchments area does not have a negative impact on water quality as well as protecting agricultural productivity of the area. These objectives can be achieved by ensuring that development, including dwellings, are related to agricultural production and that further fragmentation of land is avoided.

115 The Rozens were critical of the council and Western Water for assuming that because the land is located in a rural area, agriculture is the preferred land use outcome and dwellings are discouraged unless they are associated with commercial agricultural use of the land. They placed considerable emphasis on a statement about rural living in clause 21.03 of the municipal strategic statement relating to key issues and trends that:

Rural living development can be used to make a positive contribution to growth management and environmental enhancement.

116 This was linked to statements in clause 21.07-3 about the Environmental Living area that:

Limited development will be supported, subject to positive environmental outcomes.

117 On the other hand, as Mr John Glossop said in giving town planning evidence on behalf of Western Water:

It is counter intuitive to say that lots in the Rural Conservation Zone should be used for housing instead of certain rural or environmental values. The RCZ is one of the most restrictive non-urban zones in terms of controlling activity to retain high quality environmental values. Rural-residential or lifestyle land use, particularly where one holding is fragmented into four, does not necessarily bring environmental benefits notwithstanding the potential for regulation through management plans or the best of intentions of the current or future owners. Such properties do not rely on the active use of the land to derive an income and are often used as weekend retreats for leisure and relaxation rather than rural tasks such as weed management, control of pests and fence mending.

³³ Environmental Significance Overlay Schedule 4 – Eppaloch Proclaimed Catchment

- 118 We consider it is inappropriate to ‘cherry pick’ isolated statements from the diversity of the local planning policy framework applying to the subject land. We consider that the overall thrust of the LPPF, when read as a whole, focuses on protection of water catchments and water quality, recognising the rural character and associated landscapes of the area, and protecting agricultural land. We do not consider that there is any overall support for promoting dwellings in this area. Rather, if dwellings are to be permitted, then they must make a positive contribution to improving the condition of the environment. This does not mean that the potential for improving the condition of the environment of itself justifies further dwellings. Instead, we interpret the LPPF to mean that especially with larger land holdings used for agriculture, such as the subject land, it is policy that dwellings are related to agricultural production and that further fragmentation of land is avoided³⁴.
- 119 We therefore consider that in deciding whether one or two dwellings should be permitted, the most relevant issues to consider are sustainable land management and protecting the use of the land for productive agriculture.

Sustainable land management and agriculture

120 The Rozens produced no agricultural evidence. Mr Mathew McFall gave landscape evidence in which he reviewed and adopted the landscape evidence given by Ms Carol Frank Mass at the earlier Tribunal hearing. As previously discussed, this includes recommendations for revegetation, a weed eradication program and the provision fencing to exclude stock from revegetated areas along the length of the Campaspe river and in other locations.

121 Evidence about agriculture was given by Mr Ray Phillips on behalf of Western Water. The following is a summary of his expert opinion:

A land capability assessment of the property indicates that it is of variable agricultural quality due to the characteristics of landform, soil type and drainage patterns but with an overall rating of 3 out of a 5 point classification system where 1 is best and 5 is worst.

The property’s agricultural productivity potential is currently depressed as a result of poor vegetative composition and a lack of improvements to enable progressive farm management activity to be conducted.

The proposal of erecting a dwelling on each of the four titles will be inconsistent with the intent contained within the current planning scheme. It is also likely to alienate land from commercial rural activity and could result in a deterioration of both rural and conservation values.

³⁴ See in particular Clause 22.19

It is considered more appropriate to retain the property as a whole as this continues to provide the opportunity for implementing Best Management Practice.

- 122 Whilst Mr Phillips' evidence was based on a proposal for four dwellings, his evidence is equally applicable to a proposal for two dwellings compared to a single dwelling, which he considers is more appropriate.
- 123 He considered that the land would be better used for grazing than cropping. The current stocking rate would be limited by the low productivity of the current species and low soil fertility. Grazing management would be further restricted by current ineffective subdivisional fencing and the lack of a reliable water supply³⁵.
- 124 The property would be responsive to Best Management Practice based on perennial grass species establishment, raising soil fertility levels, fencing of the river frontage and native vegetation from grazing by livestock, improving subdivisional fencing and extending water supply. A comprehensive management programme would also be required for the control and removal of noxious weeds. This would need to be effectively integrated with both the pasture renovation and native vegetation rehabilitation programmes.
- 125 According to Mr Phillips, while the capital cost of effecting Best Management Practice is high, the commensurate benefits of higher stocking rates, better seasonal spread of pasture production and improved property environmental values are substantial and likely to show a positive return on investment.
- 126 Implementing such a programme is capital intensive. In reaching his conclusion that a dwelling on each lot cannot be supported on agricultural and conservation grounds, and that it is more inappropriate to retain the property as a whole as a means of retaining the opportunity for implementing Best Management Practice, Mr Phillip said:

Implementing such a programme is capital intensive and requires a high degree of land management skill. It is easier to achieve when the property is run as a whole given its land capability characteristics. There is no compromise as all environmental features are contained within the boundary lines, particularly water runoff catchments. The opportunity of improving water quality is high, while protecting both conservation and landscape values.

Further, the size of the holding is sufficient to attract the interest of professional farmers, be they of rural or urban background. The property, in its developed form, would serve as a useful adjunct to other rural activity.

³⁵ Dams to provide water for livestock have been constructed in the two main drainage lines occurring within the property. Mr Phillips said that the dams do not appear to be well sited to maximise water inflow and their size is insufficient to guarantee water supply over a normal period of summer drought.

- 127 In our view, it is apparent that the sustainable management of this land and any productive agricultural use requires the injection of substantial capital and the exercise of good land management practice. There is more likely to be an acceptable standard of sustainable land management under a single ownership of a large parcel, where the interest of the owner is more likely to be focussed on agricultural production, than if ownership is fragmented into multiple smaller lots. If this occurs, there will be a more diverse range of land management skills and the focus is more likely to be on non-agricultural, rural living use. There will be no economies of scale and the result in costs per hectare will be higher. If the land is fragmented in ownership, there is the added complication of separate landowners being responsible for revegetation and fencing of the riparian buffer zone, as recommended by Ms Frank-Maas and Mr Phillips, and required by Guideline 3 of the current Guidelines³⁶. This is a most important improvement to the condition of the environment and should not be compromised.
- 128 Overall, we consider that there are serious disadvantages associated with fragmenting ownership of this land from a rural land management perspective. Whilst the disadvantages associated with two dwellings are not as great as if four dwellings were permitted, they are still substantially greater than if only one dwelling was permitted and the land is retained in a single ownership. We consider that the land is more likely to be used for sustainable, productive agriculture if it is retained in a single ownership and that much better land management practice and environmental improvements are likely to result. Hence, on this basis, only one dwelling should be permitted.

What are the benefits of this proposal?

- 129 The Rozens did not enumerate any particular benefits that would result from four new dwellings or even two dwellings. Instead, there was an underlying assumption that because the land is the form of four separate allotments, a house should be permitted on each lot. We consider that there is no basis for such an assumption having regard to all the policy material in the planning scheme. The scheme consistently emphasises the unacceptable detriment that would result to the important values of the area if all subdivided land in the area were to be developed for residential purposes³⁷.

³⁶ Guideline 3: deals with Vegetated corridors and buffer zones along waterways in the *Guidelines: Planning permit applications in open, potable water supply catchment areas* (May 2009). The Guideline provides that the responsible authority should encourage the retention of natural drainage corridors with vegetated buffer zones at least 30 metres wide along waterways. This will maintain the natural drainage function, minimise erosion of stream banks and verges and reduce polluted surface runoff from adjacent land uses. The corridors and buffer zones should be fenced to minimise erosion and sediment discharges caused by the intrusion of stock, domestic animals and vehicles and should be vegetated using indigenous plants species.

³⁷ For example, see clause 22.01 dot point 10 in "Major Influencing Factors". This was also the message contained in the Panel Report for Amendment C21.

- 130 The primary benefit advanced by the Rozens for allowing dwellings on the land is that the implementation of the revegetation/management plan³⁸ would be certain to achieve environmental benefits. These benefits would be consistent with various aspects of planning policy. They say that these benefits must be balanced against the alleged risk of detriment to water quality that an additional two dwellings on this land might cause.
- 131 We do not accept this argument. We agree that the planning scheme acknowledges the opportunity to use the grant of a permit for a dwelling as the catalyst for achieving positive environmental outcomes. But when evaluating the positive environmental outcomes that may result from allowing one or two dwellings on this land, we have concluded that the greater chance of success and long term improvements will result if the land is retained in a single holding and managed as a single unit.
- 132 The other clear benefit to the Rozens in allowing a permit for two dwellings rather than one, is the greater economic return they are likely to achieve if they sell the land. However, the financial return to a landowner is not a relevant planning consideration that we should be influenced by.
- 133 We are responsible for applying the policies and objectives of the planning scheme and other documents and guidelines that we are required to have regard to by virtue of the planning scheme and the Act. On balance, a consideration of these matters and the evidence and facts of this case lead us to the conclusion that the preferable outcome is to grant a permit for only one dwelling, not two.
- 134 We acknowledge that both the council and Western Water conceded that two dwellings would be acceptable. Nevertheless, we are not bound by this concession. We consider that whilst two dwellings at a density of 1:36 hectares might be supportable on water quality and catchment management grounds, all other things being equal, having regard to issues associated with sustainable land management and agricultural productivity, we consider that one dwelling is a preferable outcome. This will result in a dwelling density for this land that is considerably more than the 1:40ha density specified in the current Guidelines instead of a density that is slightly less. We regard this as a beneficial outcome for the catchment because evidence and policy all indicate that the lower the dwelling density in open, potable water catchments the better.

Past poor decisions

- 135 We understand that there is an example of permits for a recent subdivision and for dwellings being granted to the north of the subject land, which do not comply with the current guidelines. From the information given, we also question this development's compliance with various other aspects of the LPPF. It was another example of the council's failure to properly refer the subdivision permit application to Western Water as a relevant referral

³⁸ Proposed initially by Ms Frank-Maas and endorsed by Mr McFall

authority. The Rozens attempted to argue that due to the council's inconsistent approach, there was a stronger reason to support their permit application.

136 Our role is not to conduct an inquiry into past decision making. We believe that deficiencies in the administrative process, which led to the failure to refer the subdivision to Western Water³⁹, have been addressed and are unlikely to recur. We do not consider that past poor decisions should justify another round of poor decisions that will undermine the integrity of the catchment, good land management practice and retention of the land for productive agriculture.

CONCLUSION

137 The Macedon Ranges Planning Scheme is full of references to the need to protect water resources in open, potable water catchments and the need to limit development to achieve this objective. As time goes on, development within the catchments will reach a critical point where it will be necessary to say no to further development if this objective is to have any meaning.

138 The Government has provided recent Guidelines for planning permits in open, potable water catchments, which specify a dwelling density of 1:40 ha. The point has come in the Campaspe River Catchment Area where an application of this Guideline means that the development expectations of the Rozens for four dwellings on their land must be refused. We have concluded that in the interests of net community benefit and sustainable development, a permit for only one dwelling should be granted.

139 We have drafted conditions that will enable the Rozens (or ultimate landowners) to select their preferred site subject to certain criteria and subject to the satisfaction of the responsible authority and Western Water. Various other conditions will be to their satisfaction also. We consider that after all this time, it is preferable to grant a permit than to require yet another round of hearings before the Tribunal about the detail of the ultimate development. We have attempted to keep the conditions relatively simple with the detail to be provided in the endorsed plans required under the permit.

Helen Gibson
Deputy President

Peter O'Leary
Member

Graeme David
Member

³⁹ Although the permit was described as a 'resubdivision' of existing lots, for the purposes of the planning scheme and the *Subdivision Act* 1988, it was a subdivision.

APPENDIX A

PERMIT APPLICATION NO:	P203-0011
LAND:	863 Ashbourne Road, Woodend
WHAT THE PERMIT ALLOWS:	Use and development of one dwelling and associated works in accordance with the endorsed plans.

- 1 Before commencement of the dwelling allowed by this permit, amended features and levels plans (three copies) to the satisfaction of the responsible authority must be submitted to and approved by the responsible authority. When approved, the plans will form part of this permit. The plans must show:
 - a. Details of the road access to the dwelling.
 - b. Location of the dwelling and all works.
 - c. A detailed schedule of external materials, colours and finishes.
 - d. Dimensions of all plans and elevations.
- 2 Before commencement of the development allowed by this permit, an amended landscape plan (three copies) to the satisfaction of the responsible authority must be submitted to and approved by the responsible authority. When approved, the landscape plan will form part of this permit. The landscape plan must be generally in accordance with the 'Landscape: Proposed Revegetation' Plan (Dwg.No.2523/2A) prepared by Carol Frank-Mas, but modified to show:
 - a. A landscape buffer strip along the Campaspe River that has a width of not less than 30 metres.
 - b. The proposed stock fence along the Campaspe River setback at least 30-metres from the top of the river bank.
 - c. A notation that only weed control and revegetation is to be carried out in the area referred to in condition 2(b) to assist natural regeneration.
 - d. Weed control and revegetation to be carried out to improve the roadside link along Ashbourne Rd and the Campaspe River along the northern boundary of the site.
 - e. The drainage lines between each dam and the Campaspe River to be fenced and revegetated, to prevent stock access and aid in water quality improvement.
- 3 The use and development approved by this permit must be in accordance with the plans and documentation endorsed under this permit. The layout, materials and colours of the development shown on the endorsed plans must

not be altered without the prior written consent of the Responsible Authority.

- 4 Prior to the commencement of any development on the site, the owner must prepare an Environmental Management Plan to the satisfaction of the responsible authority and Western Water. The Environmental Management Plan must provide for:
 - a. The landscaping, as approved under Condition 2 to be completed within 3 months of the completion of the dwelling.
 - b. A program for the ongoing protection and maintenance (including replacement of dead or dying vegetation) of landscaping works to the satisfaction of the responsible authority.
 - c. No stock permitted within the fenced riparian and revegetation area.
 - d. Weed control to be carried out in accordance with industry accepted methods.
 - e. All fencing shown on the approved landscape plan to be installed prior to completion of the planting.
 - f. The ongoing maintenance (including replacement where necessary) of the fencing.
 - g. Stormwater runoff treatment.

When approved by the responsible authority and Western Water, it shall be endorsed and form part of the permit.

- 5 The Environmental Management Plan must be carried out to the satisfaction of the responsible authority in accordance with condition 4 and any other time frames included in the detail of the Plan to the satisfaction of the responsible authority.
- 6 Prior to occupation of the dwelling, any existing vehicle crossing to be used to access the dwelling must be upgraded to the satisfaction of the responsible authority.
- 7 All reticulated services must be provided underground to the satisfaction of the responsible authority.
- 8 Stormwater runoff from buildings and paved areas must be dissipated as normal unconcentrated overland flow to the satisfaction of the responsible authority.

Western Water

- 9 Prior to the commencement of any buildings or works on the land, a waste water treatment system, including supporting documentation, to the satisfaction of the responsible authority and Western Water, must be approved by the responsible authority, which incorporates:

- a. A system to treat all sullage and sewerage waste that will prevent waste and treated waste from discharging from the property at all times.
 - b. A Land Capability Assessment.
 - c. Measures undertaken by the owner to ensure there is a prepaid maintenance contract and proof of an ongoing maintenance program.
 - d. The primary and reserve effluent disposal envelopes isolated and fenced from any building, driveway, livestock, vehicles or permanent recreational area.
 - e. Sediment control measures during construction.
- 10 The wastewater treatment system approved under condition 9 must be installed prior to occupation of the dwelling and thereafter must be maintained to the satisfaction of the responsible authority and Western Water.
- 11 Any existing or proposed shed must not be used for the purposes of accommodation or contain facilities that result in the discharge of wastewater.

North Central Catchment Management Authority

- 12 Any proposed dwelling must be sited a minimum of 100m from any waterway.
- 13 The floor level of any dwelling must be a minimum of 2.0m above the top of the river bank at the upstream boundary of the lot.

Permit time limit

- 14 This permit will expire if the use and development hereby permitted is either not commenced within three years, or not completed within five years, from the date of the permit. A written application may be made to the responsible authority for the extension of the permit prior to the permit expiring or within three months after the expiry of the permit.

--- End of Conditions ---