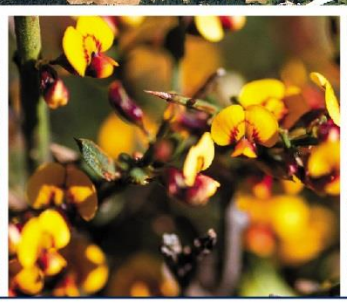
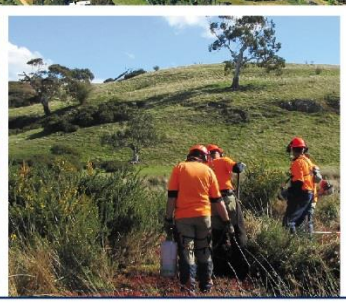
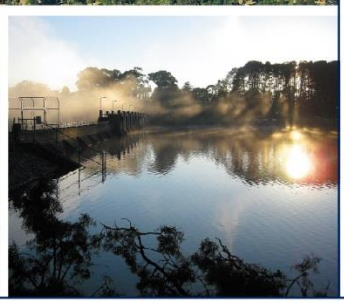
Coliban WATER

Drinking Water Storages and Land Management Plan 2014–2019

Improving water quality through land management and community relationships







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Overview

We manage a number of reservoirs and storage basins including Lauriston, Malmsbury and Upper Coliban Reservoirs that provide the water supply needs for approximately 130,000 people and a wide range of industries and business.

We are responsible for ensuring that we manage our water storages and land in line with legislation. The *Safe Drinking Water Act 2003* and Safe Drinking Water Regulations 2005 provides guidelines to help identify and manage risks to water quality and approaches for improving water quality at the source, leading to a reduction in the need for water treatment.

We have implemented a number of measures to reduce risks to water quality and improve our land management in the past. We are now looking to consolidate these programs and to develop a blueprint for action over the next five years.

The main objective of this plan is to reduce risks to raw water quality through improved management of activities on land immediately adjacent to the reservoirs that we own or manage.

We also seek to improve our relationships with neighbouring landowners and the community, as this is vital to achieving positive land and water quality outcomes.

This Plan has a five year timeframe and outlines:

- the purpose of the storages and why protecting water quality is important
- the main risks to water quality at the storages
- our approach to land management issues
- how we propose to address identified issues through the implementation.

Actions proposed in this Plan can be summarised as achieving improvements in:

- land management;
- livestock management;
- recreational access;
- vegetation management;
- cultural heritage, and
- landholder and community engagement.

In preparing this plan, we have consulted with a range of stakeholders including:

- general community and recreational users from a web based questionnaire on our website
- interviews with neighbouring landowners from each of the storages with different land use activities,
- interviews with key agencies and organisations including:
  - Macedon Ranges Shire Council and Hepburn Shire Council
  - Department of Environment and Primary Industries including:
    - Fisheries Victoria, Fire Prevention, Crown Lands, Pest Plants and Animals, Environment and Water/Biodiversity and Farm Services

- Central Highlands Water
- North Central Catchment Management Authority
- Dja Dja Wurrung Corporation and Dja Dja Wurrung Enterprises

The input from these stakeholders has been invaluable in preparing this Plan that we believe provides comprehensive strategies, policies and plans for the future management of our Coliban River storages.

Why have a storage and land management plan?

As Land Managers of the Coliban River storages – Lauriston, Malmsbury and Upper Coliban Reservoirs – the main sources of drinking water for around 130,000 people, we have a duty of care as well as legislative obligations to reduce the risks to water quality and to provide safe drinking water to our communities.

There are strict requirements on levels of nutrient and sediment in the water as well as harmful bacteria and viruses that can lead to gastrointestinal illness and disease if not effectively treated. The Australian Drinking Water Guidelines recommend managing water quality at the source to the maximum degree practicable as part of a "multi-barrier" approach to supplying safe drinking water.

Two key guiding principles are:

- The key risks to consumers of drinking water are pathogenic micro-organisms. Protection of water sources and treatment are of paramount importance and must never be compromised
- The drinking water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the raw water supply.

Source protection typically means providing fencing from stock and management of recreational activities at drinking water reservoirs and a vegetated buffer strip to help reduce micro-organisms such as bacteria and viruses, nutrients and soil from entering the water body.

As noted the primary focus of the Plan is to reduce risks to raw water quality through improved management of activities on land that we own or manage immediately adjacent to the reservoirs (Figure 1).

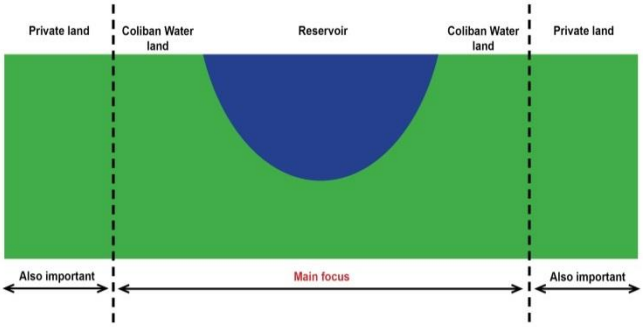


Figure 1 Diagram showing main area of focus for our land management activities.

However, a secondary objective is to improve our relationships with adjacent landowners and community members which we consider is vital to influencing positive water quality and land management outcomes.

Over the last 10 years, we have initiated a number of measures to reduce risks to water quality and improve management of the land surrounding our reservoirs including:

- pest plant and animal management
- revegetation works
- rehabilitation of old mining sites
- removal of livestock from our land through fencing
- fire hazard reduction
- management of recreational usage of storage lands.

To date, these measures have had limited or varying levels of success, and pressures of the recent millennium drought have magnified the situation.

Guidance to our neighbouring landowners was limited and the overall approach taken meant that we did not achieve good land management outcomes. This Plan provides a more consistent, clear framework for future land management and activities on our land surrounding the storages.

Our vision

Our vision is to reduce risks to raw water quality for town water supplies, whilst continuing to provide valuable community assets.

How will we get there?

A range of programs may be implemented aimed at addressing the current practices that pose the greatest risk to raw water quality in Lauriston, Malmsbury and Upper Coliban Reservoirs.

We will also aim to influence the management of adjacent private land by working with the landholders and where possible, involve the general community in our planning to improve the designated recreational areas.

We would like to address the issues between landholders and recreational users by providing opportunities to work together to improve the overall value of these great community assets.

We have identified a number of management issues and the related goals and actions to resolve them. Some of these planned actions will deliver benefits across multiple themes.

Achieving the Plan

The success of the Plan is dependent on achieving a balance between water quality management needs and those for neighbouring agriculture activities and recreational interests.

We have various options to achieve our objective of protecting water quality.

We could completely close our catchments - which is the strategy adopted for some of Melbourne's drinking water storages. This "closed catchment" approach provides the highest water quality protection, but denies all access to a valued community asset for public recreation and agriculture needs.

Our catchment consists of 250 square kilometres, which would be impractical and costly to close.

A completely "open catchment" with no restrictions and unlimited access for all forms of recreation and agriculture poses unacceptably high risks to the provision of safe drinking water and would fail the intent of Australian Drinking Water Guidelines. It would also create unacceptable hazards to public safety for recreation users and neighbouring landholders.

Therefore, the intention is to consider all interests and provide an appropriate balance between them.

What does the Plan cover?

The Plan covers the land associated with our three catchment reservoirs including:

- land that we own or manage (primary focus)
- neighbouring private land that abuts the storage land
- other neighbouring public land that abuts the storage land e.g. road reserves.

While the immediate concern is in implementing actions from this Plan, we will also work with other landholders, the North Central Catchment Management Authority (NCCMA) and other stakeholders upstream of our catchments to further protect water quality.

What the Plan does not address?

The Plan is not an operational plan. It does not address the manner in which we manage the dam structures themselves, the regulation of water levels or the transfer of water or floods down the rivers.

We will continue to manage the storages to protect water resource sustainability and quality, and dam safety.The purpose of the storages

The catchment area for the Malmsbury, Lauriston and Upper Coliban storages includes the high rainfall areas around Trentham, East Trentham, Lyonville, Little Hampton and Tylden (see Figure 4). Runoff from the catchment is usually very reliable.

The three storages are located in sequence down the river; Upper Coliban Reservoir spills into Lauriston Reservoir and Lauriston spills into Malmsbury Reservoir.

The water for Kyneton is pumped from Lauriston Reservoir and a gravity channel conveys water from Malmsbury to Castlemaine and Bendigo for the purpose of raw and treated water supply.

None of the above storages were constructed with the objective of providing flood mitigation outcomes to downstream landowners. Additionally, the highest priority for all large dams must always be safety due to the potential consequences of failure.

Our management objectives for storages (in order of priority) are:

1. Safety of the dam
2. Water supply security
3. Flood mitigation

Figure 2: The Upper Coliban Reservoir spilling in September 2013

When full, the storages hold 75,000 megalitres of water for supply to people in Kyneton, Castlemaine, Bendigo and other towns in the district.

Water from the three storages is transferred as required to holding basins and treatment plants located south of Kyneton, east of Castlemaine and south of Bendigo.

The Coliban River storages provide the best quality and cheapest source of supply, negating the need for bulk water pumping from alternate sources at increased cost.

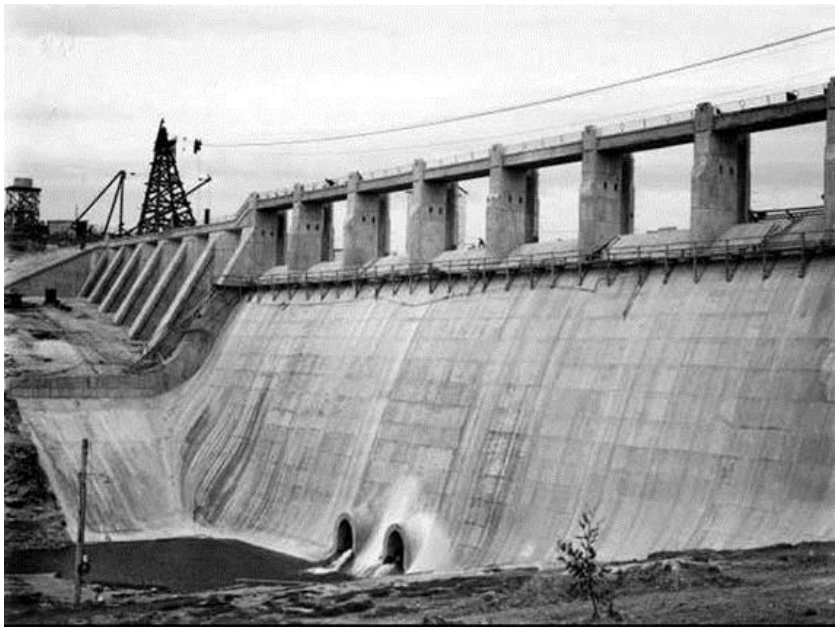


Figure 3: Lauriston Reservoir under construction in 1940s

As regional populations continue to grow, water supplies, originally for multipurpose use, including gold mining and irrigation, are now increasingly required for meeting urban water needs.

Therefore, it is now more important to protect these raw water supplies to allow us provide safe drinking water to our customers.

This, combined with our obligations to meet the higher standards in the Australian Drinking Water Guidelines, means that historic land management arrangements need to change to meet current and future community needs.

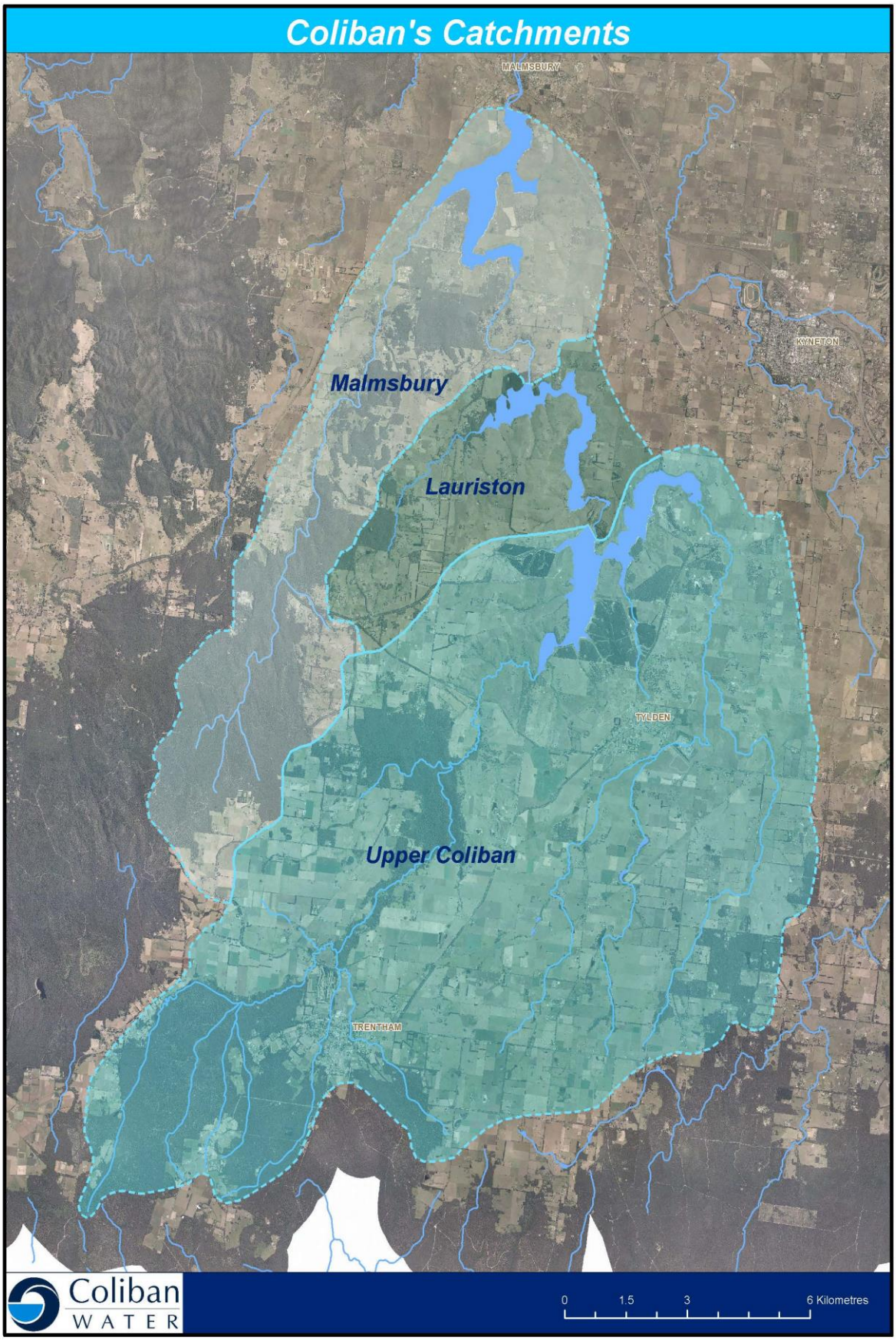


Figure 4: Catchment Map of Coliban Drinking Water Storages

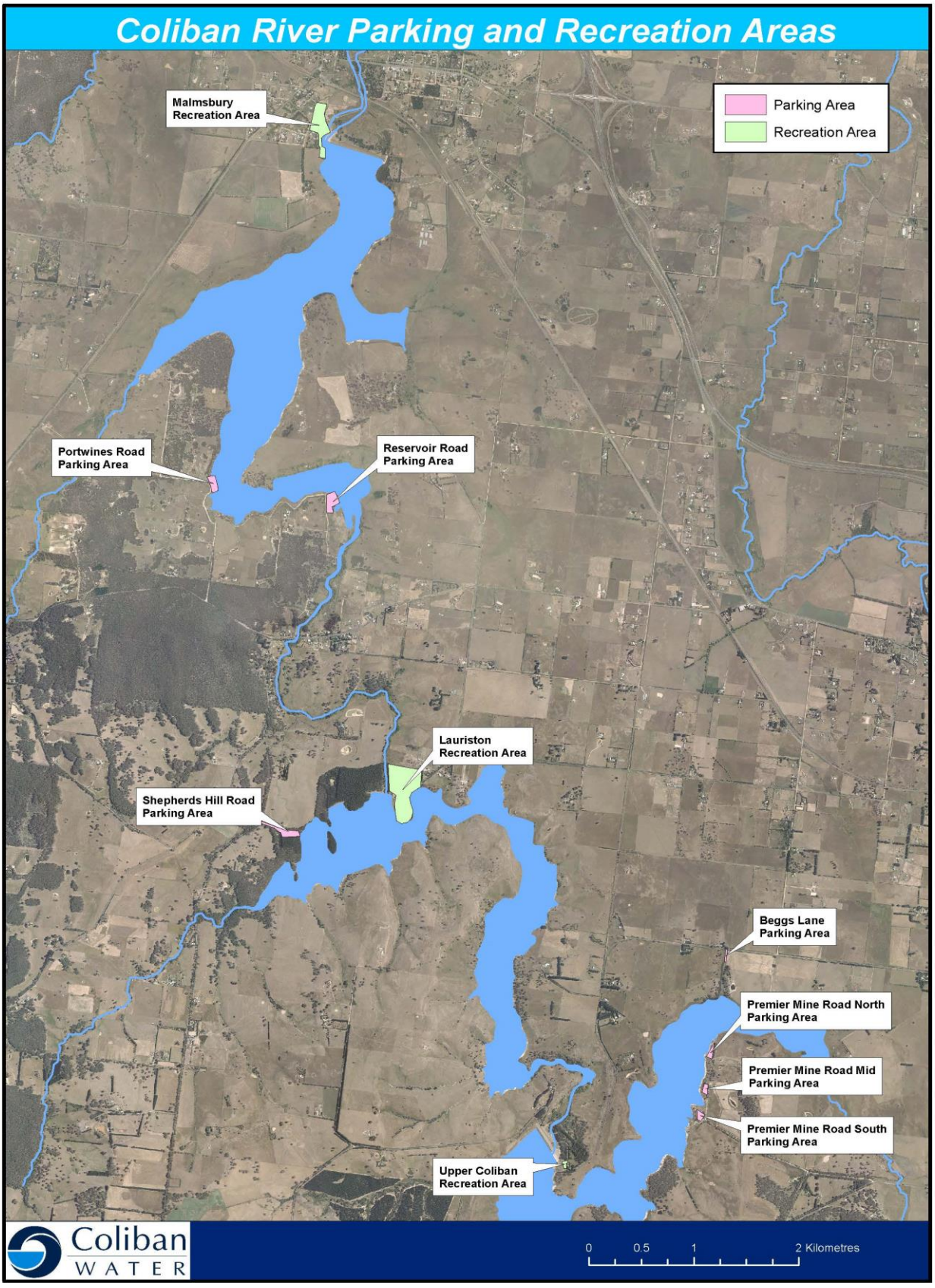


Figure 5: Recreation and parking areas at storages

Creating the Plan

In order to develop a plan for our future land management, we wanted to receive input from our neighbouring landholders, community members, recreational users and other land managers and allied stakeholders such as the NCCMA and Department of Environment and Primary Industries (DEPI).

Initial consultation with our neighbouring landholders identified an array of land use activities on the land abutting our storages.

Commercial businesses including tree plantations, vineyards and beef cattle and sheep farms are most common while a number of hobby farms, weekender/holiday homes with smaller acreages and residential gardens were also identified.

Many landholders reside full-time on their properties with the aid of off-farm incomes, working locally or in Melbourne. A reasonable number are also absentee landholders who spend limited time on site, posing certain challenges for managing land.

Indications are that adjoining landholders value different aspects of living adjacent to the storages and have varying levels of knowledge about good land management practices.

Figure 6: Majority of land adjoining the drinking water storages is unfenced grazing land

Why protecting water quality is important

Currently over half of our reservoir shoreline is not fenced resulting in neighbouring landholders accessing reservoir water for stock watering, our land for grazing and relying on the water boundary to contain stock.

This situation poses unacceptable risks for water quality, landholders' rights and public safety.

Grazing stock directly accessing the water poses a risk through faecal contamination of the raw water supply.

Faeces from stock can contain bacteria and viruses including Giardia, Cryptosporidium, Salmonella and *Escherichia coli* (E. coli) which are harmful to human health. As such these are of concern to drinking water supplies, and require higher levels of treatment to remove. Lambs and calves in particular pose the highest risk to water quality.

Native animals (such as kangaroos) pose a reduced risk of contaminating water from faeces as they are less likely to carry strains of the above organisms that are infectious to humans and “shed” lower levels of them in their faeces.

Stock and recreational usage can also affect nutrient and sediment levels adding to the treatment required before it can be supplied for drinking water purposes.

Human faeces can also pose a risk to raw water quality from activities where primary contact with water occurs, such as swimming or where inappropriate toileting takes place close to water bodies.

Onsite wastewater management systems (septic tanks) within catchments that are not maintained may also pose a risk to raw water quality. Hence, these risks must also be managed using the “multiple barrier” approach.

Reducing input from stock and humans will also reduce nutrient levels, which when high, can lead to blooms of Blue Green Algae.

Blue Green Algae occurs naturally within water bodies, however with increased nutrients in water and warm weather, the algae can bloom to high levels. Some species are capable of producing and releasing toxins. These toxins can be hazardous to humans, stock and pets without appropriate treatment. Reducing nutrients will also help improve the physical and chemical characteristics of drinking water.

Land ownership and access

We are responsible for the management of all of the land below the water as well as the land surrounding the reservoirs above the full supply level ranging from 2-30 metres wide.

At Upper Coliban and Lauriston Reservoirs, the vast majority of this land is freehold title that we own, whereas at Malmsbury Reservoir approximately 66 per cent is our freehold title and around 34 per cent is Crown Land - reserved for the purpose of water supply where we are the responsible land manager.

As the delegated crown land manager, we are responsible for managing the land consistent with the purpose of water supply and have the right to close these areas to public access or use if appropriate.

In general, neighbouring landholders do not have “drover” or “riparian” rights to access water but in some areas these rights may have been created where the storage water body regularly collects on their freehold land. This occurs where the property boundaries have been depleted by wave action and soil erosion, causing water to erode back through our land onto private property.

Many landholders are currently accessing water without a licence for their stock and are unaware that they require a Section 51 Take and Use Licence to use this water legally. A Section 51 Take and Use Licence authorises the holder to take and use water for a specific purpose under the *Water Act 1989*.

There are a limited number of easements that cross our land providing the easement holder with access to this land for droving or reasonable purpose. They are not entitled to ongoing occupation of the land or for access to the water body itself. To obtain access to water legally the landowner must still obtain a Section 51 Take and Use Licence to access the water.

Figure 7: Southern end Malmsbury Reservoir approaching full supply in spring 2013.

Land management

We have legislative responsibility and a duty of care to protect water quality, water supply, cultural heritage, native vegetation and to ensure recreational areas are safe. We are also responsible for the control of pest plants and animals and for managing fire risks appropriately.

We are also mindful of providing a safe environment for our staff, neighbours and recreational users. These considerations have shaped the actions proposed in this Plan.

The legislative framework does provide us with a range of regulatory tools that we may consider using if satisfactory outcomes through engagement with landholders and community are not achieved, or where there is an immediate/significant risk to human health or safety.

Our preference is to have a cooperative approach with our neighbours and the wider community in ensuring we meet our obligations and this Plan proposes the framework and identifies a pathway to achieve this.

Figure 8: Southern end of Malmsbury Reservoir summer 2013. When storages are low, vehicle and stock access increases.

Land management

Developing our system for land management

We would like to improve our current internal system for setting land management priorities, budgets and works. To do this we need to improve our understanding of existing natural and built assets on our land and threats to these.

We have already undertaken significant work over the last 12 months to map existing fencing assets and identify areas where pest plant control has been undertaken.

Further work is required to identify areas of remnant native vegetation that requires protection, emerging or increasing pest plant and pest animal populations, and fire or other safety hazards.

It is hopeful that this Plan will provide a more consistent clear framework for land management standards to be achieved that are apparent to everyone involved and particularly our neighbours.

Goals

To define clear land management standards for our land including pest plant and animal control, revegetation works, recreational access and protection of remnant vegetation.

To rate our land assets in a consistent manner detailing condition and risks for annual programs budgeting

To have a consistent approach to land management works and programs

Actions

1. Audit land we own or manage at the storages to understand the presence and condition of natural assets (native vegetation, pest plants and animals) and built assets (fencing, signage) on that land.
2. Incorporate information from the audit about assets on land that we manage into our asset management and mapping system.
3. Undertake condition reporting of audited land, vegetation, fencing and improvements against minimum and desired standards following inclusion of information into our management systems.
4. Build our works programs and determine budgets based on the condition of land and the standard required.
5. Develop and implement Site Environmental Works Plans for all land where high levels of investment, multi-issue management, or adjoining landowner involvement is required.

Improved access for land management

In many cases, it is difficult for us to access our land without going through adjoining landholders properties. In these cases, we rely on the goodwill of our neighbouring landholders to allow us access to our land and the foreshore.

We need to improve access to our land, so that we can effectively and efficiently carry out necessary land management operations and works.

Goal

To gain improved access to our land for improved management

Actions

6. Assess the access needs and identify strategic locations for access.
7. Consult adjoining landowners regarding access and negotiate a limited number of access points in order to facilitate better access and meet our land management obligations.

Managing fire risks

Large fires in the wider catchment are a concern for water quality and the community impacted by the fire.

Land uses adjacent to the storages, on both our land and private land, have potential to provide increased fire risk.

Certain activities on land adjacent to the storages could ignite a large fire (such as recreational users lighting campfires) during Fire Danger Periods.

Land with high fuel loads from long grass, native vegetation or pest plants such as gorse as well as land that is difficult to access can increase fire risk.

We currently slash grass on our land to reduce fire risk but in some areas, this is impractical due to steep slopes preventing access.

Livestock grazing has helped to reduce this risk in the past and we will consider this to help manage fire hazard risks in the future.

Goal

Manage the fuel load on our foreshore land to reduce fire risk.

Actions

8. Strategically graze (by issuing conditional grazing licences) and slash grass on foreshore land as appropriate to manage fire risk.

   The issuing of conditional grazing licences will be dependent on livestock owners demonstrating appropriate animal management practices.
9. Engage with stakeholders such as Department of Environment and Primary Industries (DEPI), CFA and local Councils to encourage private landholders to minimise risk.

Pest Plant and Animal (PPA) control

Control of pest plants (primarily gorse and blackberry), and pest animals (primarily foxes and rabbits), are an issue for all landholders and land managers in the district.

Like all landholders, we have a regulatory requirement to manage these invasive species.

There is a slight risk to water quality due to misuse of chemical pesticides and baits as well as a slight risk of erosion during the period after weeds are controlled and before a cover of desirable species is established.

We recognise that some landholders assist us with appropriate control of pest plants on our land when controlling their own weeds; however, greater collaboration is needed to ensure effective control of pest species. We need to be proactive and adaptive in our approach to pest plants and animals on our land.

We will focus our efforts in controlling Regionally Prohibited and Regionally Controlled Weeds in accordance with our existing obligations under the *Catchment and Land Protection (CaLP) Act 1994.*

In order to control pest species on our land, we need to work collaboratively with our neighbours. If we cannot achieve this through cooperation, we may need to work through DEPI to ensure compliance with management obligations.

Goal

To improve our management of invasive pest plants and animals, working cooperatively with our neighbours.

Actions

10. Implement pest plant and animal programs consistent with the findings from the audit (Action 1) and minimum standards (Action 3), our obligations under the CaLP Act, where work has previously been undertaken, and where the adjoining landowner is attempting to meet their obligations.
11. Share information with neighbouring landholders about land management near the storages and work cooperatively with our neighbouring landholders in pest plant and animal control.
12. We will participate in wider district programs such as Landcare, NCCMA and local Council programs and other land management initiatives to improved management of pest plants and animals.

Managing fluctuating water levels

Fluctuating storages and river levels can create risks to grazing licencees' livestock and assets.

These risks include the potential for stock escaping and wandering, becoming stranded or stuck in boggy areas or equipment being flooded. The holders of conditional grazing licences can better manage the land and stock if they have access to information about changing water levels.

Historically, we did not communicate this type of operational information, but in more recent times, efforts have been made to notify landholders about water levels and stream flows.

This information will be made available on our website, however, the responsibility will be on the landowner to monitor these levels rather than the responsibility of our reservoir staff to communicate them.

Goal

To provide grazing licence holders with access to information about proposed storage levels and river flows

Actions

13. Communicate our intended release of flows to storage grazing licence holders and put information on our website when possible.

    Note: all water levels in storages can be affected by storm activity from unregulated waterways that we have no control over and can cause fluctuations in water levels.

Managing foreshore erosion

The main soil types surrounding the storages are derived from rocks from both volcanic (i.e. basalt and trachyandesite) and sedimentary (sandstone) geology sources types. Soils derived from sedimentary rocks are more prone to erosion than those derived from volcanic rock types.

Native vegetation and pasture grasses are important in protecting the soils from erosion as their roots help to bind the soil together.

In many locations around the storage foreshores, significantly clearing of native vegetation has occurred since European settlement and pasture grasses have been heavily grazed reducing their effectiveness in preventing erosion and landslips.

Soil erosion at the full supply level caused by wave action can have many impacts including:

- Reduced water quality in the storage through higher turbidity
- Eroding the boundary between Coliban Water land and private freehold land
- Undercutting fences and making it difficult to build new boundary fences
- Increasing the likelihood of landslips
- Difficulties gaining access around the perimeter of the storage when full
- Cultural heritage risks from active erosion.

Steep sided storages at full supply level with heavily grazed foreshores are also more susceptible to landslips from the rapid rewetting of the banks during large inflow.

Figure 9: Foreshore erosion and landslip at Upper Coliban Reservoir in 2013

Goal

To address the current impacts of excessive foreshore erosion and landslip, and manage this issue into the future.

Actions

14. Undertake programs involving inspections, surveys of foreshore areas, and boundary alignments to document and map where areas of erosion and landslip are occurring.
15. Develop prioritised and targeted management responses including:
    - control with rock beaching, revegetation, and fencing to stabilise soils and protect banks, and/or
    - survey and realign property boundaries through limited land acquisition

    Consult with landholders regarding options where a need is identified for land acquisition.

Pines removal

Several of the pine stands located at our reservoirs has been identified as a risk to both the public and our employees. This risk is increasing with the age of the pine trees. This risk to safety is being addressed by a separate pine safety removal project. Further details on this project can be found on our website www.coliban.com.au and click on the link to *Projects*.

Goal

To make areas safe for the public and employees.

Actions

16. Remove the unsafe pine plantations in stages, reinstate recreational areas and/or revegetate with local indigenous species in consultation with the community.

Native flora and fauna

There has been significant clearing of native vegetation around our storages leaving only isolated patches of remnant native vegetation or individual large old trees.

We will protect this remnant vegetation that in many cases is subject to invasion by pest plants, overgrazing or illegal clearing.

We have identified some significant native flora and fauna species listed under the *Flora and Fauna Guarantee Act (FFG) 1988* including:

- A number of wading birds species
- The brush tailed phascogale located in adjoining forests
- The plant *Hypsela tridens* reported at Malmsbury spillway in the 1960s.
- Endangered ecological vegetation classes (EVCs) such as Plains Grassy Woodlands.

Revegetation of all foreshore lands with native shrubs and trees however, may not be achievable due to fire hazard risks, the investment and maintenance required, and/or to protect infrastructure such as fencing. In some areas, revegetation with just native grasses may be satisfactory.

Our approach will be to target revegetation at providing maximum water quality benefits as well as improving the condition of remnant native vegetation. This will help to provide connectivity for native fauna between vegetation patches and to prevent erosion.

Additionally, we will use locally indigenous species consistent with Ecological Vegetation Classes which are native plant species that occur together to form particular communities. These communities are based on floristic, structural and ecological features. Where possible we will use locally collected seed.

Revegetation will only be undertaken where boundary fencing is in place to protect plants from grazing and trampling by stock.

In many cases, Site Environmental Works Plans will be undertaken to plan projects where revegetation is anticipated, due to the need to manage multiple issues simultaneously.

Our land will need active management as fencing occurs and grazing pressures are reduced.

Buffer strips and native vegetation plantings will require ongoing maintenance and we will allow for access tracks on our land adjoining the fences to ensure maintenance can be undertaken.

This will also limit damage to fences through fallen tree limbs. Areas where pines are to be removed will also be actively managed.

Goal

Our objective is to maintain, protect and enhance existing biodiversity consistent with the indigenous ecological vegetation classes.

Actions

Existing native vegetation will be identified during the condition assessment (refer Action 1).

17. Revegetate areas with locally indigenous species and where possible locally collected native seed.

    We will actively work with neighbours, other stakeholders and Landcare groups, where practical, to achieve this goal

18. Revegetation will take into account the need for access tracks on buffer strips adjoining fences.

Native vegetation clearing

Recently, there have been incidents of illegal vegetation clearing by adjoining landholders on our land. Where appropriate to manage the risk we will prune the tree or if no other option exists, remove it or undertake hazard reduction activities. At no time should adjoining landholders remove or clear vegetation on Coliban Water owned or managed land without our written consent.

Goal

To maintain and protect existing biodiversity.

Actions

19. Report incidents of illegal native vegetation clearing on Coliban Water owned or managed land to the compliance unit of Local Council and if necessary pursue the issue through the Victorian Police.

Septic tank effluent and private land development

Effluent from onsite wastewater systems such as septic tanks and runoff from land development can enter waterways and storages.

We have referral status under the Victorian Planning Provisions for all use and development that requires a planning permit in the Eppalock Declared Water Supply catchment (Special Water Supply Catchment). This includes all catchment areas upstream of Malmsbury Reservoir and the land adjacent to the reservoirs in this Plan.

The trend for hobby farms and further intensification of land uses is inevitable in the wider catchment area given its proximity to Melbourne and population growth. However, with the continued implementation of the controls in the Catchment Policy and Guidelines, State Planning Policy and Local Planning Policy, the risks to water quality can be minimised.

Goal

To implement a consistent response to land use and development planning applications and improved management of existing onsite wastewater systems that will minimise risks to water quality.

Actions

20. Continue to utilise Catchment Policy and Guidelines and other policy and guidelines to manage development in the Special Water Supply Catchment Area.
21. Continue to work with local government to encourage sensible controls on new development and in the implementation of councils Domestic Wastewater Management Plans for monitoring and managing onsite wastewater systems.

Livestock management

Fencing and access to storages

Unlimited and unrestricted access to the storages by grazing livestock can directly degrade water quality through faecal contamination with bacteria, viruses and nutrients. In addition, overgrazing of foreshore grasses and vegetation significantly reduces the ability of these areas to act as “buffer strips” in removing these organisms, nutrients and sediments from entering the water body.

Buffer strips are important as they slow down overland flows and aid in filtration and the entrapment of pollutants.

This has been a long-standing risk that historically has been managed by having comprehensive water treatment, but this is not consistent with best practice for land management or water quality protection.

Fences are required to limit the access of stock to the water as well as to:

- keep stock separate whether the livestock is on adjacent land, our land, Crown Land or road reserves
- help reduce tension between neighbouring landowners from wandering stock to help protect both stock and the public.

We recognise the cost of fencing to landowners may be prohibitive.

Given this, and the need to ensure a consistent standard of fencing across storage frontages. Coliban Water will fully fund the cost of surveying and fencing according to the principles outlined in Appendix 1.

Funding is available until June 2018 to deliver this fencing initiative.

We will apply our existing standard for fencing but will also work with landholders regarding their specific needs and will adjust these standards to achieve mutually acceptable outcomes. We will also consult with landholders regarding access gates.

Ongoing maintenance of fencing will be a joint responsibility between the landholder and ourselves.

Some boundaries will be difficult to fence due to erosion, steep slopes, excessive vegetation or mineshafts. We will take a practical approach to fencing in these cases. This may require some private land acquisition to realign boundaries in exceptional circumstances or where only minimal realignment is necessary to avoid obstacles, Coliban Water in agreement with adjoining landowners, may fence off the surveyed boundary.

We will prioritise the implementation of fencing where stock are currently accessing the storage to achieve the greatest risk reduction to water quality.

Fencing incentives will not be retrospectively applied or available to landowners where fencing has already occurred.

Goals

To meet best practice recommended for managing risks to drinking water quality and land management

To install fences to a suitable standard for the circumstance in collaboration with neighbouring landholders.

Actions

22. Work cooperatively with our neighbours to fence land boundaries to provide and protect buffer strips around all storages. Fund the costs of fencing according to the principles in Appendix 1.

Figure 10: Sheep accessing water body with no fencing in place

Access to water

The fencing of properties will mean that landholders will lose access to water for grazing stock.

If we build fences and do not provide assistance for alternative water supply then this is likely to result in poor maintenance of fences and/or gates left open so that stock can access the storages for water. Therefore we will, subject to conditions, provide subsidies to affected landholders to install alternative water supplies on their properties,

Historically a range of agreements have been reached with landholders in relation to the amount of fencing and off storage watering funded by us.

This Plan articulates our proposed approach in relation to fencing and off storage watering incentives over the next five years providing more consistency (Appendix 2).

This incentive is for the installation off-storage watering infrastructure but not the cost of the licence to legally take the water. Our off-storage watering incentive is detailed in Appendix 2.

The incentive is largely consistent with the NCCMA stock watering incentive for waterways, being be based on a rate per meter of reservoir frontage fenced. The rate itself however may vary, reflecting the different objectives of the agencies.

Again, the priority for implementation will be in areas where stock are currently accessing the storage to achieve the greatest risk reduction to water quality.

Where extensions to existing paddock water supplies are not possible or practical, we will assist landholders receiving an off storage water incentive to apply for a Section 51 Take and Use Licence for approval to pump water from the storage subject to certain conditions. In these cases, landholders will be required to meet all fees and charges.

Where a landowner is not eligible for an off-storage watering incentive, they would still be able to apply for a Section 51 Take and Use Licence, subject to fees and conditions, to pump from the storage.

Goal

To ensure stock do not access water storages for stock watering following fencing.

Actions

23. Provide an incentive for off-storage watering infrastructure on a rate per metre fenced between neighbouring private landholders and our land at storages. This is for the landholder to install off-storage watering supplies.
24. Where alternative water supplies or extension of existing paddock water supplies are not practical, landholders may apply for Section 51 Take and Use Licence to pump from the storage.

Improving landholder knowledge on land management practices

If livestock are grazed at unsustainably high stock rates then ground cover can be lost, soil erosion magnified and the risk of manure and soil being washed into the reservoir is increased. Stocking rates vary with individual land managers.

Many of our landholders are “new” to land management and are not always aware of good management practices for stock, weeds, and the use of herbicides or protecting native vegetation. While commercial farmers may understand these issues and current management practices but could benefit from further information on emerging methods and technologies that will assist them in remaining productive.

Whole Farm Planning (WFP) is a process of planning, property design and management based on the property’s natural resources and farmer goals. WFP focuses on the farm assets and developing the knowledge and skills to better plan layouts, assess land capability and the stocking potential of a farm. A WFP can help landholders to match stocking rate to land capability and improve farm layouts for productivity, whilst providing for shelter belts, native vegetation, fencing, stock watering, soil erosion and pest plant and animal control.

During our discussions with landholders, many indicated they would be interested in receiving updated information and improving skills in land management, but would like it this information targeted to cater for the different farming or landowner groups due to different interests.

Goal

To provide assistance for landholders regarding sustainable land management and farming e.g. what are sustainable stocking rates/ land carrying capacity.

Actions

25. Encourage adjoining landowners to develop Whole Farm Plans (WFP).
26. If enough interest, facilitate WFP courses for neighbouring landholders directly adjacent to the storages and providing for different farming audiences.

Grazing licences

Some appropriate grazing is required to provide fire hazard management in areas that are not accessible by machinery.

Grazing of storage areas can also provide valuable feed for livestock at certain times. The key is to achieve an appropriate balance between water quality risk and other land management objectives.

If no grazing occurs we may increase the fire risk and weeds may proliferate. There may also be increased costs in relation to grass slashing and weed control for our land.

Once fencing is in place, we may issue temporary grazing licences with specified conditions. Conditions on the licences will be reviewed and modified at regular periods to meet the needs of achieving positive water quality outcomes.

We may consider not renewing or changing licence holders if they are non-compliant with conditions.

Goal

To achieve an appropriate grazing regime that balances between water quality protection and land management at effective cost.

Actions

27. Where appropriate, issue temporary grazing licences for land we own or manage, with specified conditions with which licence holders will need to comply.
28. If unauthorised grazing of livestock occurs on our land following fencing, Coliban Water will enforce fencing or seek to impound stock as needed.
29. Engage with farmers or groups to undertake land management tasks such as slashing and weed control where appropriate.

Recreation access

The storages are valued recreational and social assets for local communities and visitors to the region. Activities undertaken are varied, but included fishing, nature and art study, picnicking and exercising.

Discussions with adjoining landowners however identified that visitors are not always considerate in how they access our lands, causing damage to fences, property, trespassing, dumping rubbish and lighting camp fires during fire danger periods. Most landholders consulted did not wish to stop recreational activities, but for visitors to be more respectful.

We will continue to encourage passive recreational uses that are consistent with our goals for protecting water quality, and restrict those activities and uses that do not align with these objectives.

Additionally, we would like this Plan to create a more considerate, respectful visitor culture towards neighbouring landholders.

Camping, boating and swimming

Camping, boating and swimming all pose an unacceptable risk to water quality due to potential human waste and pollution and are prohibited on our storages.

Facilities for these activities do not exist and there are also safety concerns with these activities.

During the consultation process, there were some suggestions to allow non-powerboats such as canoes and small sailing craft onto the water storages, however best practice for drinking water storages excludes these activities.

Goal

To protect water quality from any risk of human waste that could result from camping, boating or swimming on the storages

Actions

30. Maintain current bans on camping, swimming and boating and reinforce these bans with appropriate signage and patrols.

Camp fires

Reports from adjacent landholders suggest that recreational users light campfires which are a cause for concern during declared Fire Danger periods.

Campfires can ignite a larger fire and can be a key element in other nuisance activities such as camping, littering and excessive noise.

While small fires are unlikely to impact drinking water quality, they do increase the risk of bushfire and are often associated with activities that are inconsistent with best management such as camping, vehicle-based access and gatherings of large groups or parties.

Goal

No open fires permitted other than the BBQs provided in managed areas at Lauriston and Malmsbury recreational areas.

Actions

31. Set and enforce clear rules about fires, ensure clear signage and provide safe BBQ areas in formal park areas.

Amenities - BBQ, picnic, toilets and playgrounds

The reservoirs attract visitors. We will provide amenities in appropriate areas to encourage recreational use in these locations and to reduce the impacts of recreational use elsewhere.

Amenities will be located in existing recreational areas where they can easily be monitored and maintained.

The areas that are currently restricted due to the Pines Safety Removal project will be gradually opened and the amenities in the areas reinstated once the tree removal is complete.

Public safety is a critical concern when allowing visitors to visit an engineering structure and water body.

An increased awareness of risks to public safety has seen a trend over the past decade of not permitting access to engineering structures such as the Lauriston buttress dam or the gated structures at Malmsbury.

The proposed parking and recreational areas are shown on Figure 5.

Goals

To provide appropriate levels of amenities to encourage users to visit preferred locations and discourage them from non-preferred locations.

Provide recreational opportunities for different interest groups

Provide passive, safe amenities such as picnic tables, BBQs, toilets, open space and walking paths and avoid high risks such as public accessing infrastructure

Actions

32. Upgrade and maintain basic amenities at existing recreational areas (Lauriston & Malmsbury Reservoir embankments and Upper Coliban Reservoir Car Park).
33. Decommission the now closed amenities at the Upper Coliban Reservoir embankment.
34. Ensure adequate signage to inform the public about proper use with locational maps of amenities.

Rubbish

Some recreational users leave rubbish at the recreational sites, fishing areas and on adjoining land. This is illegal and can pose risks to water quality. Research and evidence at other sites has demonstrated that providing bins in unsupervised areas can result in more dumping than a "take-all-rubbish-home" policy.

The amount of rubbish tends to be related to the type and amount of use. Areas of heavy use tend to be most affected, especially where vehicle access is easy.

Goals

To minimise amount of rubbish left and encourage recreational users to take rubbish home.

Actions

35. Install signage encouraging recreational users to take their rubbish with them.
36. Actively enforce rubbish-dumping bans through patrols and reporting to the relevant authorities

Walking and other forms of passive recreation

Walking is a relatively passive recreational activity and is generally associated with mobile angling (such as fly fishers and lure fishing), bird watching, photography and exercise. There are few problems with this activity; however, the number of visitors may increase with population growth in the area.

Goals

To encourage safe walking and other forms of passive recreation.

Actions

37. Provide information and maps showing designated walking tracks and areas of interest to create greater respect and improve understanding of which areas are accessible to the general public.
38. Install signage encouraging recreational users to use walking tracks where available.

Fishing (Angling)

Reservoirs are valuable year round fisheries, but inappropriate access to the reservoirs can impinge on neighbours. There are two main types of angling: static bait anglers who tend to prefer locations where they can fish close to their vehicle; and mobile lure or fly anglers who like to move along the shorelines. The Plan proposes suitable areas for both types.

We are pleased to work with Fisheries Victoria in stocking of the reservoirs and will take into account species that can be fished from shorelines as boating is prohibited.

Angling itself is not an issue, it is the trespass, camping, rubbish dumping, illegal fires and unauthorised vehicle tracks that cause problems.

Figure 11: Sign indicating fishing at Lauriston Reservoir

Feedback received from landholders indicated that they did not want to prevent access to anglers but did want to limit the adverse impacts; therefore, anglers need to be respectful of the rules for accessing land and must not access private land without express permission to do so.

Goal

To maintain access for responsible angling and minimise the associated problems.

Actions

39. Install informative signage with maps showing where vehicle access is and is not allowed. These signs will identify public roads, parking areas and non-permissible activities.
40. Provide walking tracks and gates for access in particular locations only.
41. Work with Fisheries Victoria on fish stocking plans and to encourage stocking of fish species that can be fished from the shoreline.
42. Consult and work with anglers and community groups for improved facilities, especially for anglers with limited mobility.

Trespass

Much of the land surrounding the storages is either land owned or managed by us or private freehold and not open for public access.

Recreational users however, tend to wander across land, especially where no fences are in place, without necessarily realising that they are trespassing on private property and this may create confusion from observers about where access is permitted. Anglers also seek new fishing spots away from the more populated areas and may cross private land without permission.

Goal

To provide clarity on the areas of our land that are open for recreational use and those that are not.

Actions

43. In conjunction with Action 38, clarify through fences and bollards where recreational access is permitted.
44. Discuss concerns with neighbouring landholders so that access messages are consistent and actively seek to correct any misinformation posted or promoted by third parties.
    Fencing of property boundaries will also help to clarify and define private land boundaries (refer Action 22).

Shooting

The use of firearms near the storages presents dangers to adjacent landholders and recreational users and is illegal on our land.

Adjoining landholders must operate their firearms in accordance with best practice and relevant legislation and be aware of the potential close proximity of others.

Goals

To protect adjacent landholders' and members of the public from illegal shooting.

To prevent public liability issues arising from illegal shooting activity on our land.

Actions

45. Maintain the current ban on firearms and shooting on our managed land and reinforce this message with signage.

Public vehicles

Some parts of the foreshore and storage basins have a history of being used for motorbike, cars and 4WD activity. There is a long history of people getting their vehicles bogged in the storage or on tracks and needing to be towed out either by our staff or adjoining landholders.

Illegal vehicle tracks and driving through water poses problems for water quality and increase soil erosion. There are also public safety concerns for adjoining landowners and other recreational users.

Allowing vehicles in and around the storage can lead to inappropriate activities such as camping, campfires, parties, littering.

We will not assist in the physical recovery of bogged vehicles due to the potential public liability risk. Owners of bogged vehicles will be directed to towing or other roadside assistance service providers and will need to meet the cost of removal.

Goal

Limit access by vehicles and motorbikes to designated areas to minimise water quality and safety risks.

Action

Install informative signage with maps showing where public vehicle access is and is not allowed. (Refer Action 40).

46. Install and maintain bollards and designated parking areas to limit vehicle access to declared public roads and areas.

47. Patrol and enforce the rules about vehicular access through working with other stakeholders such as the Victorian Police.

48. Work with the DEPI and local Council to ensure access on public land and roads is appropriate to the needs of water supply protection.

Hazards

It is important to be aware that the natural environment can contain hazards such as steep slopes, uneven footing, trees that may drop branches, potential fire hazards and snakes. In addition, given the history of gold exploration in the area there may be mine shafts present, which are not registered or mapped through the Department of Environment and Primary Industries (DEPI).

These natural and manmade hazards should not discourage visitors from enjoying recreational activities adjoining our storages, but are a reminder that we all need to be aware of the environment we are entering and to exercise caution where appropriate in these areas.

Staff currently undertakes regular patrols of designated recreational areas and note potential hazards for follow up management actions. For recreational areas identified through the model Recreational By-laws, we will:

- Implement advisory signage and information to raise visitor awareness of potential hazards in an area.
- Discourage recreation in certain areas through management actions such as realigning paths or moving picnic facilities away from areas where increased risk might exist.
- Remove branches or the tree itself if it is an immediate danger to recreational facilities such as toilets, playgrounds or picnic areas
- Where no other cost effective solution is possible to reduce the hazard, prevent access through exclusion fencing i.e. surrounding mine shafts.

Landholders and visitors are strongly encouraged to report suspected hazards such as mineshafts or dangerous trees on our land to us for investigation.

Goal

To identify and address natural and man-made hazards to enable full enjoyment of designated recreational areas.

Actions

49. Undertake patrols of designated recreational areas and address potential hazards.

50. Apply the DEPI model Recreational By-laws, to replace our No. 8 By-law.

51. Landholders and visitors are encouraged to report suspected hazards on our land.

Cultural heritage

Aboriginal heritage

Conserving cultural heritage is important. Areas of cultural heritage sensitivity include watercourses associated with the storages. The extent and significance of aboriginal cultural heritage at our water storages needs to be better understood and to ensure that artefacts and areas of cultural heritage are protected. The land manager is responsible to protect all sites.

A Cultural Heritage Management Plan is required for any activity (i.e. the use or development of land) if the activity is high impact or falls within an area of cultural heritage sensitivity. The terms 'high impact activity' and 'cultural heritage sensitivity' are defined in the Aboriginal Heritage Regulations 2007. The Dja Dja Wurrung Corporation is the registered aboriginal party for this area.

Figure 12: Ancient Aboriginal quarry site

Goal

To protect and value existing aboriginal heritage surrounding the storages.

Actions

52. Arrange for a voluntary Cultural Heritage Management Plan to be prepared for our land.
53. Work with the Registered Aboriginal Party to provide relevant educational resources on their history in the area.

Non aboriginal heritage

Our supply system is listed on the Victorian Heritage Register, including many of the specific works associated with the storages.

Goal

To protect and value existing heritage.

Actions

54. Preserve non-aboriginal heritage registered sites and provide educational resources on their history.

Community engagement

Broader community

We aim to increase awareness in the broader community generally regarding the need to protect water quality for drinking supplies.

Goal

To create a greater understanding of the need to protect water quality and improve land stewardship amongst the broader community and other stakeholders.

Actions

55. Provide information, interpretive signage, and maps regarding the purpose of the storages and the importance of how land management activities affects water quality.
56. Coordinate all information on the storages so there is consistent messaging.
57. Update and maintain our website with information on the storages and this Plan.

Landholder relations

Feedback from landholders who participated in interviews and surveys as part of the development of this Plan indicated that they welcomed the discussions that took place and that it was a preferred method of communication.

If there is sufficient community and landowner interest, we will consider facilitating a working group of stakeholders to help inform the broader community on the implementation of the Plan.

Representatives from around the various storages and general members of the public can be involved in relation to issues such as emerging weeds, pest animal issues or difficulties with recreational users.

This working group could be an avenue for both landholders and the broader community to provide input and shape the rollout of the Plan.

This Plan represents our commitment to improve management of our land including our relationships with neighbours.

Goal

To promote a cooperative approach that leads to better land management and improved water quality.

Actions

58. Proactive communications and engagement as part of an approach to land and catchment management.
59. If there is sufficient interest, facilitate a working group consisting of interested landholders and community stakeholders to help with implementation of this Plan.

Summary of Actions

A summary of proposed actions is outlined in the following and the relative priority of each action is shown.

- High priority represents an immediate land management improvement that is expected to have a direct water quality benefit and/or is a potential legal obligation.
- Medium is an immediate land management improvement, but with a less direct water quality benefit or is of high community value.
- Low is a less immediate land management improvement with a less direct water quality benefit.

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
Land management			
1	Audit land we own or manage at the storages to understand the presence and condition of natural assets (native vegetation, pest plants and animals) and built assets (fencing, signage) on that land.	H	Neighbouring landholders
2	Incorporate information from the audit about assets on land that we manage into our asset management and mapping system.	H	
3	Undertake condition reporting of audited land, vegetation, fencing and improvements against minimum and desired standards following inclusion of information into our management systems.	M	Nil
4	Build our works programs and determine budgets based on the condition of land and the standard required.	M	
5	Develop and implement Site Environmental Works Plans for all land where high levels of investment, multi-issue management, or adjoining landowner involvement is required.	H	Yes, case by case basis
6	Assess the access needs and identify strategic locations for access.	M	Neighbouring landholders
7	Consult adjoining landowners regarding access and negotiate a limited number of access points in order to facilitate better access and meet our land management obligations.	M	Neighbouring landholders
8	Strategically graze (by issuing conditional grazing licences) and slash grass on foreshore land as appropriate to manage fire risk.	H	Neighbouring landholders
9	Engage with stakeholders such as Department of Environment and Primary Industries (DEPI), CFA and local Councils to encourage private landholders to minimise risk.	M	DEPI / CFA/ Local Government
10	Implement pest plant and animal programs consistent with the findings from the audit (Action 1) and minimum standards (Action 3), our obligations under the CaLP Act, where work has previously been undertaken, and where the adjoining landowner is attempting to meet their obligations.	H	Neighbouring landholders

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
11	Share information with neighbouring landholders about land management near the storages and work cooperatively with our neighbouring landholders in pest plant and animal control.	H	Neighbouring landholders
12	We will participate in wider district programs such as Landcare, NCCMA and local Council programs and other land management initiatives to improved management of pest plants and animals.	M	Landcare, NCCMA, Local Government
13	Communicate our intended release of flows to storage grazing licence holders and put information on our website when possible.	H	Neighbouring landholders
14	Undertake programs involving inspections, surveys of foreshore areas, and boundary alignments to document and map where areas of erosion and landslip are occurring.	H	Neighbouring landholders
15	Develop prioritised and targeted management responses for foreshore erosion including: • control with rock beaching, revegetation, and fencing to stabilise soils and protect banks, and/or • survey and realign property boundaries through limited land acquisition .We will consult with landholders regarding options where there is a need identified for land acquisition	H	Neighbouring landholders
16	Remove unsafe pine plantations in stages, reinstate recreational areas and/or revegetate with indigenous species in consultation with the community.	H	Multiple
17	Revegetate areas with locally indigenous species and where possible locally collected native seed.	M	Landcare / Neighbouring landowners
18	Revegetation will take into account the need for access tracks on buffer strips adjoining fences.	M	
19	Report incidents of illegal native vegetation clearing on Coliban Water owned or managed land to the compliance unit of Local Council and if necessary pursue the issue through the Victorian Police.	H	Victorian Police / Local government/
20	Continue to utilise our Catchment Policy and Guidelines and other policy and guidelines to manage development in Special Water Supply Catchment Areas.	H	DPCD, EPA, Local government
21	Continue to work with local government to encourage sensible controls on new development and in the implementation of councils Domestic Wastewater Management Plans for monitoring and managing onsite wastewater systems.	H	Local government

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
Livestock management			
22	Work cooperatively with our neighbours to fence land boundaries to provide and protect buffer strips around all storages. Fund the costs of fencing according to the principles in Appendix 1.	H	Neighbouring landholders
23	Provide an incentive for off-storage watering infrastructure on a rate per metre fenced between neighbouring private landholders and our land at storages. This is for the landholder to install off-storage watering supplies.	H	Neighbouring landholders
24	Where alternative water supplies or extension of existing paddock water supplies are not practical, landholders may apply for Section 51 Take and Use Licence to pump from the storage.	H	Neighbouring landholders
25	Encourage adjoining landowners to develop Whole Farm Plans.	M	Neighbouring landholders
26	If sufficient interest, facilitate WFP courses for neighbouring landholders directly adjacent to the storages.	M	Neighbouring landholders, DEPI
27	Where appropriate, issue temporary grazing licences for land we own or manage, with specified conditions with which licence holders will need to comply.	M	Neighbouring landholders
28	If unauthorised grazing of livestock occurs on our land following fencing, Coliban Water will enforce fencing or seek to impound stock as needed.	M	Neighbouring landholders, Local Government
29	Engage with farmers or groups to undertake land management tasks such as slashing and weed control where appropriate.	L	Landcare/ Neighbouring landholders

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
Recreation access			
30	Maintain current bans on camping, swimming and boating and reinforce these bans with appropriate signage and patrols.	H	General public
31	Set and enforce clear rules about fires, ensure clear signage and provide safe BBQ areas in formal park areas.	H	General public
32	Upgrade and maintain basic amenities at existing recreational areas (Lauriston & Malmsbury embankments and Upper Coliban Reservoir Car Park).	H	General public
33	Decommission the now closed amenities at the Upper Coliban Reservoir embankment..	H	Anglers, General Public, neighbouring landholders

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
34	Ensure adequate signage to inform the public about proper use with locational maps of amenities.	M	General public
35	Install signage encouraging recreational users to take their rubbish with them.rubbish policy.	H	General public
36	Actively enforce rubbish-dumping bans through patrols and reporting to the relevant authorities.	H	General public
37	Provide information and maps showing designated walking tracks and areas of interest to create greater respect and improve understanding of which areas are accessible to the general public.	M	General public
38	Install signage encouraging recreational users to use walking tracks where available.	M	General public
39	Install informative signage with maps showing where vehicular access is and is not allowed. These signs will identify public roads, parking areas and non-permissible activities.	H	General public
40	Provide walking tracks and gates for access in particular locations only.	H	General public
41	Work with Fisheries Victoria on fish stocking plans and to encourage stocking of fish species that can be fished from the shoreline.	M	Fisheries Victoria, Angling Clubs
42	Consult and work with anglers and community groups for improved facilities, especially for anglers with limited mobility.	M	DEPI Fishing Grants Program, Angling Clubs
43	In conjunction with Action 38, clarify through fences and bollards where recreational access is permitted.	H	General public
44	Discuss concerns with neighbouring landholders so that access messages are consistent and actively seek to correct any misinformation posted or promoted by third parties.	H	Neighbouring landholders, General Public
45	Maintain the current ban on firearms and shooting on our managed land and reinforce this message with signage.	H	General public
46	Install and maintain bollards and designated parking areas to limit vehicle access to declared public roads and areas.	H	General public, DEPI
47	Patrol and enforce the rules about vehicular access through working with other stakeholders such as the Victorian Police.	H	General public, Victorian Police
48	Work with DEPI and local Councils to ensure access on public land and roads is appropriate to the needs of water supply protection.	H	General public, DEPI
49	Undertake regular patrols of designated recreational areas and address potential hazards.	H	General public
50	Apply the DEPI model Recreational By-laws, to replace our No. 8 By-law.	H	General public
51	Landholders and visitors are encouraged to report suspected hazards on our land	H	General public

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
Cultural heritage			
52	Arrange for a voluntary Cultural Heritage Management Plan to be prepared for our land.	H	Dja Dja Wurrung
53	Work with the Registered Aboriginal Party to provide relevant educational resources on their history in the area.	H	Dja Dja Wurrung
54	Preserve non-aboriginal heritage registered sites and provide educational resources on their history.	M	General public

Action No.	Description of Proposed Action	Relative priority	Other stakeholders
Community engagement			
55	Provide information, interpretive signage, and maps regarding the purpose of the storages and the importance of how land management activities affects water quality.	M	General public
56	Coordinate all information on the storages so there is consistent messaging.	M	
57	Update and maintain our website with information on the storages and the Plan.	H	
58	Proactive communication and engagement as part of an approach to land and catchment management.	H	Multiple
59	If there is sufficient interest, facilitate a working group consisting of interested landholders and community stakeholders to help with implementation of this Plan.	H	Multiple

Appendix 1

Cost sharing principles for fencing

This plan articulates Coliban Water's proposed approach going forward in relation to fencing incentives. However, Coliban Water reserves the right to move directly implement compulsory fencing where water quality, public or staff safety is at risk.

Historically a range of different agreements have been reached with landowners in relation to the amount of fencing and watering systems funded by Coliban Water, based on the circumstances at the time.

There will be no retrospective payments where there is a difference between the cost shares in this Plan and the previous rates of contribution by Coliban Water towards fencing or watering.

Formalised agreements will need to be entered into by relevant parties based on agreed principles and conditions below, prior to any works occurring:

a. Subject to paragraphs (b) to (e) below, the overall principle for fencing is that, rather than the landowner being responsible for 50% of fencing costs, there should be zero cost to the landowner for fencing land adjacent to Coliban Water land around storages.

b. Where there are issues (i.e. erosional, steep land or cliff faces, mine shafts, etc…) regarding the fencing of the title boundary requiring the transfer to or acquisition of land by Coliban Water, different funding principles apply. This is because Coliban Water cannot both purchase land and fully fund fencing costs. To achieve a cost neutral outcome for landowners the following would apply (refer also to attached figure):

    i. Where the value of the land to be transferred to Coliban Water is less than 50% of the fencing cost, the value of the land will be deemed to be the equivalent of the landowners cost of the fencing and the land will be transferred to Coliban water in exchange for the payment of all fencing costs.

    ii. Where the value of the land to be transferred to Coliban Water is greater than 50% of the cost of fencing Coliban Water would pay to the landowner the difference between the value of the land and 50% of the fencing cost in exchange for the transfer of the relevant land. Coliban Water would then be responsible for 100% of the fencing cost.

    iii. Coliban Water's minimum contribution to the fencing would be 50%.

    iv. Land valuation to be based on assessment from Valuer General's office (as per Government policy).

    v. Under exceptional circumstances where boundaries are difficult to fence, Coliban Water in consultation with the adjoining landowner, may consider alternative options to land acquisition to facilitate boundary fencing.

    vi. Where fencing of the common boundary is impractical and minimal realignment of the fence is necessary to avoid natural or man-made obstacles, Coliban Water in agreement with adjoining landowners, may carry out fencing and subsidiary works off the surveyed boundary alignment.

c. Fencing will be prioritised based on an "assets" and "threats" basis:

- Cattle and sheep properties will be prioritised over other livestock properties due to their pathogen risk.
- Properties with the greatest length of storage frontage, and/or where fencing particular properties offer connectivity between other fenced properties will receive highest priority for fencing.
- Reduced incentives will apply where livestock grazing is not the primary land use i.e. forestry or native vegetation protection.

d. Clearing of land – landholder contribution may be required depending on where the main body of weed is stemming from, this will be determined on an negotiated basis

e. Ongoing maintenance of the fence is both the responsibility of the landowner and Coliban Water. Responsibility for maintenance to be attributed in the following way:

   vii. Coliban Water responsible where: maintenance requirement is due to an issue emanating from Coliban Water land i.e. tree branch falling across fence.

   viii. Landowner is responsible: where the maintenance requirement is due to an issue emanating from their land i.e. livestock damage to fence.

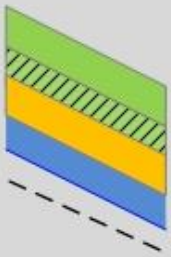
   ix. Where no cause for the maintenance issue can be attributed to either party, the responsibility for maintenance is shared 50/50.

f. Fencing incentives are only available on a "once off basis" per property. If the property is sold or subdivided no further incentives will be available for land where an incentive was paid.

g. Incentives will only be available until June 2018, availability of incentives after this time will be dependent on successfully sourcing funding through external sources.

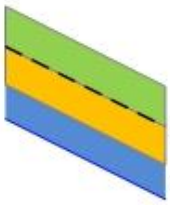
The following diagrams explain the fencing principles A. and B. as outlined in Appendix 1. Note fencing costs include survey but not clearing costs. Conditions C. to E. also apply.

Legend



Private land
Private land that needs to be acquired to enable fence instalation
Coliban Water owned or managed land
Storage or water body
Fence line

Principle a:
Subject to principles B. to E. we will pay 100% of fencing costs where there is no need to realign property boundaries due to steep slopes or eroded areas.

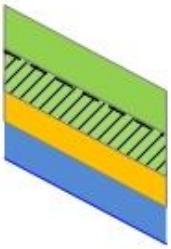


Coliban Water fully funds survey and fencing of title boundary

Storage

Principle b:
Where transfer or acquisition of land is needed to realign the title boundary to enable fencing, Coliban Water will have the land independently valued by the Valuer General's Office and apply the following principles. Our minimum contribution will be 50% of the fencing cost.

Principle 1b (i)
Where the land to be acquired is less than 50% of the fencing costs.



Fence cost is $100, 000

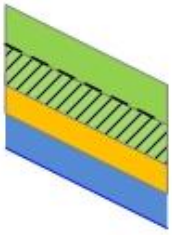
Private land to be acquired valued at $40,000

Storage

Landowner contribution is the value of land ($40,000), which would then be transferred to Coliban Water. No further contribution is required by landowner for fence installation costs.

Coliban Water pays the minimum 50% ($50,000) of the fencing costs, plus the $10,000 difference between the land value and fencing costs. Fence is therefore fully paid for and installed by Coliban Water.

Principle 1b (ii)
Where the land to be acquired is more than 50% of the fencing costs.



Fence cost is $100, 000

Private land to be acquired valued at $60,000

Storage

Landowner contribution is 50% of the fencing cost ($50,000). Difference between valued rate and 50% of fencing cost ($10, 000) is paid to landowner. No further contribution is required by landowner for fence installation costs.

Coliban Water pays the 50% ($50,000) of fencing costs. Fence is therefore fully paid for and installed by Coliban Water.

Appendix 2

Coliban Water stock watering incentive

Funding is approved until June 2018 for the provision of off-storage watering (OSW) infrastructure subject to the following terms and conditions:

- The waterbody is fenced indefinitely for the purpose of controlling stock access.
- Off-storage watering infrastructure is only being provided to service those paddocks deprived of direct water access by stock resulting from the fencing off of a waterbody. That is, the waterbody being protected must have served as the primary and permanent source of water for livestock consumption.
- Where opportunities for alternative water supplies to storages exist, Coliban Water will contribute to these. This could include either the construction of new or the extension of existing watering infrastructure from other parts of the property to those paddocks.
- Where alternative water supply opportunities do not exist and the landowner opts to obtain a Section 51 Take and Use License to pump from the storage, the adjoining landowner must comply with the requirements to construct works on Coliban Water land.
- The landholder accepts responsibility to consult with other authorities and agencies as appropriate and comply with any requirements that they may impose.
- Typical items that constitute OSW infrastructure include troughs, pipes, tanks and fittings. The rate provided may be up to a maximum of $3.50 for each meter of boundary fence protecting the storages. Coliban Water reserves the right to determine the appropriateness and/or necessity of particular items.
- Off-storage watering incentives will not be available to landholders where fencing has already been undertaken.
- Off –storage incentives are only available on a “once off basis” per property. If the property is sold or subdivided no further incentives will be available for land where an incentive was paid.
- Incentives will only be available until June 2018, availability of incentives after this time will be dependent on successfully sourcing funding through external sources

Coliban Water will not contribute funds toward:

- delivery charges on materials
- ongoing running costs and/or the maintenance of the off-storage watering system (including the pump)
- provision of electrical power
- cost of installing alternative energy sources (e.g. solar panels)
- repair of any damage to any materials and equipment funded by Coliban Water
- any fees or charges that may be imposed by other authorities

Coliban Water will not pay for the preparation of OSW quotes from suppliers.

The off-storage watering system must be completed within six months of the date of a Letter of Approval issued by Coliban Water. If the off-storage watering system is not constructed/installed within six months from this date the funding approval may be cancelled and a new application may have to be submitted. Given that funding approvals will only be awarded where funds are presently available, applicants may ‘lose their turn’ if the six months expires before the construction/installation of these items is completed.

Off-storage watering infrastructure is vested to the landholder's property by Coliban Water on behalf of its customers. Any relocation and/or re-utilisation of the items must be approved in advance in writing from Coliban Water.

Design and layout of the off-storage watering system shall be approved by Coliban Water following consultation between the landholder and Coliban Water.

The landholder is responsible for the installation and ongoing maintenance and/or replacement of the off-storage watering system. All off-storage watering infrastructure is to be installed to a standard acceptable to Coliban Water.

When the off-storage watering system is constructed/installed and functioning, the landholder shall contact Coliban Water to arrange a site inspection to confirm satisfactory completion.

Funding is approved on the understanding that all works undertaken by the landholder will be done at the landholder's own risk. The Coliban Water will not be liable for any loss of life or injury to persons or damage to property that may result from the landholder's own works.

Works shall not commence until these terms and conditions have been agreed to (in writing) by the landholder, and the landholder is in receipt of a Letter of Approval from Coliban Water.